UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 9

In The Matter Of: WASTE DISPOSAL, INC. Soil and Subsurface Gas Operable Unit Archer Daniels Midland Company ARCO Atlantic Oil Company Bethlehem Steel Corporation Chevron U.S.A. Inc. Conoco, Inc. Conopco, Inc. Di-Lo, Inc. Dresser Industries, Inc. Exxon Company, U.S.A. Ferro Corporation FMC Corporation Hathaway Company McDonnell Douglas Corporation Mobil Oil Corporation Monterey Resources, Inc. Santa Fe International Corporation Shell Oil Company Texaco Inc. Union Oil Company of California, d/b/a Unocal Union Pacific Corporation, Respondents. Proceeding Under Section 106(a) of the Comprehensive Environmental Response Compensation, and Liability Act of 1980, as amended (42 U.S.C. § 9606(a))	U.S. EPA Docket No. 97-09

AMENDED ADMINISTRATIVE ORDER FOR REMEDIAL DESIGN AND OTHER RESPONSE ACTIONS

(AMENDING DOCKET NO. 94-17)

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ATTACHMENTS

I. INTRODUCTION AND JURISDICTION

1. This Amended Order directs Respondents to perform a remedial design for the remedy described in the Record of Decision (the "ROD") for the Soil and Subsurface Gas Operable Unit for the Waste Disposal, Inc., Site ("Site" or the "WDI Site"), dated December 27, 1993. This Amended Order is issued to Respondents by the United States Environmental Protection Agency ("EPA") under the authority vested in the President of the United States by section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. § 9606(a). This authority was delegated to the Administrator of EPA on January 23, 1987, by Executive Order 12580 (52 Fed. Reg. 2926, January 29, 1987), and was further delegated to EPA Regional Administrators on September 13, 1987 by EPA Delegation No. 14-14-B. This authority was further delegated to the Director, Hazardous Waste Management Division, EPA Region 9 by Order R1290.43, dated October 26, 1988.

2. This Amended Order amends the Administrative Order for Remedial Design (the "Original Order"), Docket No. 94-17, issued on August 18, 1994. EPA is issuing this Amended Order in order to add Respondents not included in the Original Order and to amend the Original Scope of Work (the "Original SOW") to include remedial design investigative activities and other response actions not included in the Original Order.

II. FINDINGS OF FACT

3. The Waste Disposal, Inc. (WDI) Site is located in the city of Santa Fe Springs, Los Angeles County, California, on a 43-acre parcel of land. The facility is bordered on the northwest by Santa Fe Springs Road, on the northeast by Fedco Food Distribution Center and St. Paul High School, on the southwest by Los Nietos Road, and on the southeast by Greenleaf Avenue. The WDI Site contains a 42 million gallon capacity concrete reservoir

originally constructed for crude petroleum storage. The reservoir was decommissioned in the late 1920's for product storage and was subsequently used for disposing of a variety of industrial wastes. Disposal activities continued unregulated until 1949. From 1949 through 1964, Waste Disposal, Inc. operated the site under permits from Los Angeles County. The Site was closed in 1964. Various business have developed on the perimeter of the Site along the roadways and are included within the Site, but the reservoir area is undeveloped except for one small portion covered with an asphalt parking lot used for recreational vehicle storage. A map of the Site can be found in Attachment 1, Record of Decision, Soil and Subsurface Gas Operable Unit, page 2-2.

4. (A) Respondent Monterey Resources, Inc. (formerly known as Santa Fe Energy Resources, Inc.), is a successor in interest to Chanslor-Canfield Midway Oil Company, which from approximately November 1, 1921, until approximately January 6, 1932, held title to the Site. During that time hazardous substances, including some or all of those described in this section, were disposed of at the Site.

(B) Respondent Mobil Oil Corporation is a successor-in-interest to General Petroleum Corporation of California, which from approximately January 6, 1932, until approximately January 22, 1942, held title to the Site. During that time hazardous substances, including some or all of those described in this section, were disposed of at the Site.

(C) Respondent Di-Lo, Inc. (formerly known as the Dia-Log Company) is a successor-in-interest to the Ford Alexander Corporation, which from approximately January 22, 1942, until approximately September 23, 1947, held title to the Site. During that time hazardous substances, including some or all of those described in this section, were disposed of at the Site. Respondent Di-Lo, Inc. also currently holds title to one portion of the Site.

(D) Respondent Chevron U.S.A. Inc., is a successor-in-interest to Standard Oil Company of California. Respondent Dresser Industries, Inc., is a successor-in-interest to Security Engineering Co., Inc. FMC Corporation is a successor-in-interest to the Chicksan Tool Co. Respondent Texaco Inc., is a successor-in-interest to the Texas Company. ARCO is a successor-in-interest to the Richfield Oil Company. Conoco, Inc., is a successor-in-interest to Douglas Oil Company. Exxon Company, U.S.A., is a successor-in-interest to Humble Oil Company. Conopco, Inc., is a successor-in-interest to Lever Brothers Company. Santa Fe International Corporation is a successor-in-interest to Santa Fe Drilling Company. Ferro Corporation is a successor-in-interest to the Productol Chemical Company, Inc.

(E) Respondents Mobil Oil Corporation (through its predecessor-in-interest General Petroleum Corporation of California), Chevron U.S.A. Inc. (through its predecessor-in-interest Standard Oil Company of California), Texaco Inc. (through its predecessor-in-interest the Texas Company), Monterey Resources, Inc. (through its predecessor-in-interest Chanslor-Canfield Midway Oil Company), Dresser Industries, Inc. (through its predecessor-in-interest Security Engineering Co., Inc.), FMC Corporation (through its predecessor-in-interest the Chicksan Tool Co.), Union Oil Company of California, Archer Daniels Midland Company, Bethlehem Steel Corporation, ARCO (through its predecessor-in-interest the Richfield Oil Company), McDonnell Douglas Corporation, Conoco, Inc. (through its predecessor-in-interest Douglas Oil Company), Exxon Company, U.S.A. (through its predecessor-in-interest Humble Oil Company), Conopco, Inc. (through its predecessor-in-interest Lever Brothers Company), Hathaway Company, Atlantic Oil Company, Santa Fe International Corporation (through its predecessor-in-interest Santa Fe Drilling Company), Union Pacific Corporation, Ferro Corporation (through its predecessor-in-interest Productol Chemical Company, Inc.), and Shell Oil Company arranged, by contract or agreement, or otherwise, for the disposal or treatment at the Site of

hazardous substances owned or possessed by Respondents. Hazardous substances of the same kind as those owned or possessed by Respondents are present at the Site.

5. The Respondents identified in paragraph 4 are collectively referred to as "Respondents."

6. On July 22, 1987 (52 Fed. Reg. 27620-23), pursuant to section 105 of CERCLA, 42 U.S.C. § 9605, EPA placed the WDI Site on the National Priorities List, set forth at 40 C.F.R. Part 300, Appendix B.

7. To study and undertake response activities in phases, EPA divided the Site into operable units. The operable units for the Site are (1) Soils and Subsurface Gas, and (2) Groundwater. This Order addresses the remedial design for the Soils and Subsurface Gas Operable Unit. Based on the results of the investigative activities and monitoring conducted under this Amended Order, the groundwater component may be combined into the soils and subsurface gas operable unit.

8. From approximately September 1987 to July 1993, EPA undertook a Remedial Investigation and Feasibility Study ("RI/FS") for the Site pursuant to CERCLA and the National Contingency Plan, 40 C.F.R. Part 300. The media characterization reports for the Site were completed in May of 1989, with the final RI report completed in November 1989. The FS for the Soils and Subsurface Gas Operable Unit was completed August 2, 1993.

9. Pursuant to section 117 of CERCLA, 42 U.S.C. § 9617, EPA published notice of the completion of the Feasibility Study ("FS") for Soils and Subsurface Gas and of the proposed plan for remedial action on August 12, 1993, and provided an opportunity for public comment on the proposed remedial action. A public meeting was held on September 1, 1993, to present the options

evaluated in the FS and EPA's preferred alternative. EPA also presented its proposed plan and preferred alternative to the Santa Fe Springs City Council on August 26, 1993, and conducted an informational meeting for the parents of St. Paul High School students on September 9, 1993.

10. The decision by EPA on the remedial action to be implemented for the WDI Site Soils and Subsurface Gas Operable Unit is embodied in a final Record of Decision ("ROD"), executed on December 27, 1993, on which the State of California had a reasonable opportunity to review and comment. The ROD is attached to this Amended Order as Attachment 1 and is incorporated by reference. The ROD is supported by an administrative record that contains the documents and information upon which EPA based the selection of the response action.

11. Substances found in the surface and subsurface soil at the Site include, but are not limited to, arsenic, lead, thallium, beryllium, chromium, chromium, benzo(a)pyrene, benzene, DDT, petroleum aromatic hydrocarbons (PAHs), vinyl chloride, and polychlorinated biphenyls (PCBs). Arsenic, benzene, chromium, and vinyl chloride are known human carcinogens, and several of the detected PAHs are probable human carcinogens. These substances are co-mingled at the Site in disposal sumps, the concrete reservoir, and in the soils throughout the Site. Most of the contaminated soil lies below ground surface, but some surface soil contamination has been identified. Vinyl chloride, as well as benzene, methane, trichloroethylene (TCE), and other volatiles, have been identified in the subsurface gas. Perchloroethylene (PCE) has been identified both in the subsurface gas and in the groundwater beneath the site.

12. Based on the Remedial Investigation ("RI"), hazardous substances have been identified at the Site that may pose a threat to human health if not addressed by implementing the

response action in the ROD. Data from soil, groundwater, and soil gas sampling were incorporated into the various media characterization reports and are included in the ROD and the Administrative Record.

13. In March 1988, EPA undertook a removal action, erecting a fence around the southern corner of the Site (at Los Nietos Road and Greenleaf Avenue) to increase Site security and prevent accidental exposure to surface contamination.

14. (A) The contamination present on-site at the WDI Site exists in the soil and groundwater matrices, and in the form of subsurface gases. A large portion of the Site currently has a layer of fill covering the contaminated material, with vegetation growing on the cover. The remaining parcels contain operating businesses, most with paved facilities.

(B) The Final Endangerment Assessment of November 1989 identified the present and future pathways and possible or known routes of exposure of contamination to humans. Under current Site conditions, possible exposure pathways consist of direct contact with contaminated surface soils and inhalation of airborne particulates and volatiles by students and nearby residents. Under future use scenarios, the possibility of construction and residential activity could expose contaminated subsurface material to the surface, where direct contact and inhalation of hazardous substances would then be possible.

(C) There is also potential for rainwater to flush contaminants from the soil into the groundwater beneath the Site. The contaminants could then migrate through the aquifers and into the drinking water supply.

15. The Site is located next to St. Paul High School, and is surrounded by light industrial facilities. Residences are located approximately 50 yards from the Site, across Greenleaf Avenue. The portion of the Site where the reservoir is located

is vacant, except for a portion of the north-west reservoir area, which is being used to store recreational vehicles. The remainder of the reservoir-containing parcel is covered with vegetation. Future development of the Site will need to take into account underlying subsurface gases and soil contamination. Subsurface gases generated by the decomposition of products in the soil may rise to the surface, and could enter buildings through cracks in the foundations. Development of the Site could lead to exposure to contaminated soils or subsurface gases during excavation of building foundations or other construction activities. If no action is taken at the Site, contamination may also migrate into the groundwater aquifer used for drinking water.

16. The December 27, 1993 ROD for the Soils and Subsurface Gas Operable Unit requires that an impermeable multi-layered cap be constructed over the reservoir area of the Site. The ROD also requires that a gas venting system be included in the cap design, and that a flaring treatment system be constructed, if necessary. The remaining parcels where underlying contaminated soils exist are required to have restrictions and notices recorded in the appropriate land records office, identifying the extent of contamination and restricting or limiting the development that may occur on the parcels. Groundwater monitoring is required in order to determine the effectiveness of the cap and ensure that the remedy is protective of groundwater. For more detailed information regarding the selected remedy, refer to Attachment 1 of this Amended Order.

17. The purpose of the impermeable cap is to prevent direct contact with the underlying contaminated soil, and prevent rainwater from permeating the contaminated soil and flushing contaminants into the groundwater. The gas venting and treatment system will remove decomposition gases from beneath the cap, helping to maintain cap integrity by reducing pressure. It will

also treat hazardous substances in the subsurface soil gas, if necessary, to reduce the potential risk to human health and the impact to the environment. The deed restrictions will be placed on properties where underlying contaminated soils are not excavated to provide information on the extent of contamination and prevent accidental exposure to hazardous substances within the soil during construction activities.

18. On August 18, 1994, EPA issued an Administrative Order for Remedial Design ("the Original Order"), Docket No. 94-17, to the following Respondents: Chevron U.S.A. Inc.; Dia-Log Company (now known as Di-Lo, Inc.); Dresser Industries, Inc.; FMC Corporation; Mobil Oil Corporation; Santa Fe Energy Resources, Inc. (now known as Monterey Resources, Inc.); Texaco Inc.; and Union Oil Company of California, dba Unocal. The effective date of the Original Order was August 30, 1994. On September 2, 1994, the Respondents named in the Original Order sent written notice to EPA of their intent to comply with the Original Order. On April 12, 1995, EPA approved a Remedial Design Work Plan ("RD Work Plan") submitted by the Respondents named in the Original Order. Pursuant to the terms of the Original Order, the RD Work Plan set forth a step-by-step plan for completing the Remedial Design.

19. The Respondents named in the Original Order have been performing Remedial Design activities pursuant to the terms of the Original Order, the Original SOW and the RD Work Plan. The tasks completed to date are set forth in Paragraph 39 of Section IX (Work to be Performed) of this Amended Order. As of the date of issuance of this Amended Order, the Remedial Design Work is 60% complete.

20. Based on a review of data from the Site, EPA has determined that certain Remedial Design investigative activities, in addition to those provided for in the Original SOW and the RD Work Plan for the Original Order, should be performed. EPA has

also determined that treatability studies/pilot projects ("treatability studies") regarding soil vapor extraction ("SVE") and indoor air monitoring should be performed. The additional Remedial Design investigative activities are set forth in the Amended Statement of Work ("Amended SOW").

21. After the issuance of the Original Order, EPA identified additional potentially responsible parties in connection with the WDI Site. The additional parties who have been named as Respondents to this Amended Order are as follows: Archer Daniels Midland Company; Atlantic Oil Company; Bethlehem Steel Corporation; ARCO; Conoco, Inc.; Conopco, Inc.; Exxon Company U.S.A.; Ferro Corporation; Hathaway Company; McDonnell Douglas Corporation; Santa Fe International Corporation; Shell Oil Company; and Union Pacific Corporation.

22. In order to have the Remedial Design ("RD") and other response actions, as identified in the Amended SOW, completed and in order to add the new parties identified in the preceding paragraph as Respondents, EPA is issuing this Amended Order.

III. CONCLUSIONS OF LAW AND DETERMINATIONS

23. The Waste Disposal, Inc., Site is a "facility" as defined in section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

24. Respondents are "persons" as defined in section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

25. Respondents are "liable parties" as defined in section 107(a) of CERCLA, 42 U.S.C. § 9607(a), and are subject to this Amended Order under section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

26. The substances listed in paragraph 11 are found at the Site and are "hazardous substances" as defined in section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

27. These hazardous substances have been disposed at the Site and have migrated or threaten to migrate from the Site into the soil and groundwater.

28. The past disposal of hazardous substances at and migration of hazardous substances from the Site are a "release" as defined in section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

29. The potential for future migration of hazardous substances from and within the Site poses a threat of a "release" as defined in section 101(22) of CERCLA, 42 U.S.C. §9601(22).

30. The release and threat of release of one or more hazardous substances from the facility may present an imminent and substantial endangerment to the public health or welfare or the environment.

31. The contamination and endangerment at this Site constitute an indivisible injury. The actions required by this Amended Order are necessary to protect the public health, welfare, and the environment.

IV. NOTICE TO THE STATE

32. On March 21, 1997, prior to issuing this Amended Order, EPA notified the State of California Environmental Protection Agency Department of Toxic Substances Control that EPA would be issuing this Amended Order.

V. ORDER

33. Based on the foregoing, Respondents are hereby ordered, jointly and severally, to comply with the following provisions of

this Amended Order, including but not limited to all attachments to this Amended Order, all documents incorporated by reference into this Amended Order, and all schedules and deadlines in this Amended Order, attached to this Amended Order, or incorporated by reference into this Amended Order:

VI. DEFINITIONS

34. Unless otherwise expressly provided herein, terms used in this Amended Order which are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in the statute or its implementing regulations. Whenever terms listed below are used in this Amended Order or in the documents attached to this Amended Order or incorporated by reference into this Amended Order, the following definitions shall apply:

A. "Amended Scope of Work" or "Amended SOW" shall mean the scope of work for implementation of the Remedial Design at the Site, as set forth in Attachment 2 to this Amended Order. The Amended Scope of Work is incorporated into this Amended Order and is an enforceable part of this Amended Order.

B. "Amended Order" shall mean this Amended Administrative Order for Remedial Design and Other Response Actions, Docket No. 97-09 , dated March 31, 1997, for the Site, and all of the attachments hereto.

C. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601 et seq.

D. "DTSC" shall mean the California Department of Toxic Substances Control.

E. "Contractor" shall mean the individual, company, or companies retained by or on behalf of Respondents, or by each Respondent, to undertake and complete the Work.

F. "Day" shall mean a calendar day unless expressly stated to be a working day. "Working Day" shall mean a day other than a Saturday, Sunday, or Federal holiday. In computing any period of time under this Amended Order, where the last day would fall on a Saturday, Sunday, or Federal holiday, the period shall run until the end of the next Working Day.

G. "Deliverables" shall mean documents, letters, data, plans, reports, and other items submitted to EPA and DTSC for review, comment, or approval in accordance with this Amended Order. Deliverables will be identified in this Amended Order, and in the attached Amended Scope of Work (Attachment 2), and the attached Schedule and List of Deliverables (Attachment 3), as RD-x, where x is the number of the deliverable identified in this Amended Order. Deliverables should be identified by number, as well as title, when submitted.

H. "EPA" shall mean the United States Environmental Protection Agency.

I. "National Contingency Plan" or "NCP" shall mean the National Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, including any amendments thereto.

J. "Operation and Maintenance" or "O&M" shall mean all activities required for long term operation, maintenance, and monitoring activities after all elements of the remedial action have been constructed or otherwise put in place.

K. "Original Order" shall mean the original Administrative Order for Remedial Design (including all of the attachments thereto), Docket No. 94-17, signed on August 18, 1994, for the WDI Site.

L. "Original Scope of Work or "Original SOW" shall mean the original scope of work for implementation of the Remedial Design at the Site, which was Attachment 2 to the Original Order.

m. "Other Agencies" shall mean those agencies identified by the EPA Project Manager.

n. "Paragraph" shall mean a portion of this Amended Order identified by an arabic numeral.

o. "Performance Standards" shall mean those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations, identified in the Record of Decision and Amended Scope of Work, that the Remedial Action and Work required by this Amended Order must attain and maintain.

p. "Record of Decision" or "ROD" shall mean the EPA Record of Decision relating to the Waste Disposal, Inc. Site, Soils and Subsurface Gas Operable Unit, signed on December 27, 1993, by the Regional Administrator, EPA Region 9, and all attachments thereto.

q. "Remedial Action" or "RA" shall mean those activities, included in the Record of Decision and any changes or amendments, thereto, except for Operation and Maintenance, necessary to implement the final plans and specifications submitted by the Respondents and approved by EPA, pursuant to the Amended Order.

r. "Remedial Design" or "RD" shall mean those activities to be undertaken by Respondents to develop the final plans and

specifications for the Remedial Action pursuant to the Original Order and this Amended Order.

s. "Response Costs" shall mean all costs, including direct costs, indirect costs, and accrued interest, incurred by the United States and the State of California to perform or support response actions at the Site. Response costs include but are not limited to the costs of overseeing the Work, such as the costs of reviewing or developing plans, reports and other items pursuant to this Amended Order and costs associated with verifying the Work.

t. "Section" shall mean a portion of this Amended Order identified by a roman numeral and includes one or more paragraphs.

u. "Site" shall mean the Waste Disposal, Inc. Superfund Site, encompassing approximately 43 acres, located in the city of Santa Fe Springs, Los Angeles County, California, as described in the Record of Decision. The Site is bordered on the northwest by Santa Fe Springs Road, on the northeast by Fedco Food Distribution Center and St. Paul High School, on the southwest by Los Nietos Road, and on the southeast by Greenleaf Avenue.

v. "State" shall mean the State of California.

w. "United States" shall mean the United States of America.

x. "Work" shall mean all activities Respondents are required to perform under this Amended Order, including but not limited to Remedial Design for the Soils and Subsurface Gas Operable Unit, and any activities required to be undertaken pursuant to Sections VII through XXII, and XXV of this Amended Order.

VII. NOTICE OF INTENT TO COMPLY

35. Respondents shall provide, not later than thirty (30) days after the date this Amended Order is signed, written notice (RD-24) to EPA's Remedial Project Manager (RPM) stating whether they will comply with the terms of this Amended Order. If Respondents do not unequivocally commit in writing to perform the RD as provided by this Amended Order, and provide the necessary written evidence of their commitment to perform, they shall be deemed to have violated this Amended Order and to have failed or refused to comply with this Amended Order. Respondents' written notice shall describe, using facts that exist on or prior to the effective date of this Amended Order, any "sufficient cause" defenses asserted by Respondents under sections 106(b) and 107(c)(3) of CERCLA. The absence of a response by EPA to the notice required by this paragraph shall not be deemed to be acceptance of any Respondent's assertions.

VIII. PARTIES BOUND

36. This Amended Order shall apply to and be binding upon each Respondent identified in paragraph 3, its directors, officers, employees, agents, successors, and assigns. Respondents are jointly and severally responsible for carrying out all activities required by this Amended Order. Each Respondent shall communicate and cooperate with the other Respondents. No change in the ownership, corporate status, or other control of any Respondents shall alter any of the Respondents' responsibilities under this Amended Order.

37. Respondents shall make best efforts to coordinate in the performance of the Work required by this Amended Order with any person not a Respondent to this Amended Order who offers to perform or, in lieu of performance to pay for, in whole or in part, the Work required by this Amended Order. Best efforts to coordinate shall include, at a minimum:

(a) Replying in writing within a reasonable period of time to an offer to perform or pay for, in whole or in part, the Work required by this Amended Order;

(b) engaging in good-faith negotiations with any person not a Respondent to this Amended Order who offers to perform or to pay for, in whole or in part, the Work required by this Amended Order; and

(c) good-faith consideration of a good-faith offer to perform or pay for, in whole or in part, the Work required by this Amended Order.

38. A Respondent shall provide a copy of this Amended Order to any prospective owner or successor of such Respondent before a controlling interest in such Respondent's assets, property rights, or stock is transferred to the prospective owner or successor. Respondents shall provide a copy of this Amended Order to each contractor, subcontractor, laboratory, or consultant retained to perform any Work under this Amended Order, within five days after the effective date of this Amended Order or on the date such services are retained, whichever date occurs later. Each Respondent also shall provide a copy of this Amended Order to each person representing that Respondent with respect to the Site or the Work and shall condition all contracts and subcontracts entered into hereunder upon performance of the Work in conformity with the terms of this Amended Order. With regard to the activities undertaken pursuant to this Amended Order, each contractor and subcontractor shall be deemed to be related by contract to the Respondents within the meaning of section 107(b)(3) of CERCLA, 42 U.S.C. § 9607(b)(3). Notwithstanding the terms of any contract, Respondents are responsible for compliance with this Amended Order and for ensuring that their contractors, subcontractors and agents comply with this Amended Order, and perform any Work in accordance with this Amended Order.

IX. WORK TO BE PERFORMED

39. EPA issued the Original Order for Remedial Design on August 18, 1994. The Original Order contained, as an attachment, the Original SOW, which set forth the various Remedial Design activities required under the Original Order. These activities were numbered as deliverables RD-1 through RD-23. The Respondents under the Original Order have performed certain of the Remedial Design activities required under the Original Order and the Original SOW. The following Remedial Design deliverables have been submitted to and approved by EPA to date under the Original Order: RD-1 (Notice of Intent to Comply with Original Order); RD-2 (Selection of Design Contractor); RD-3 (Qualification of Selected Design Contractor); RD-4 (PRP Project Coordinator); RD-5 (Remedial Design Work Plan); RD-6 (Sampling and Analysis Plan); RD-11 (Site Health and Safety Plan), for which EPA approval is not required; RD-16 (Preliminary (30%) Design) and RD-17 (Intermediate (60%) Design), which were submitted as one deliverable; RD-20 (Site Access Agreements); RD-21 (Records Preservation Notice for Original Order); RD-22 (Financial Assurance); and RD-23 (Design Contractor Insurance or Indemnification). The requirements for the following deliverables under the Original Order were rescinded, but have been reinstated under the Amended Order: RD-9 (Treatability Study Work Plan) and RD-10 (Data Acquisition and Management Plan). RD-12 through RD-15 were not used, but held in reserve, under the Original Order.

40. In issuing this Amended Order EPA is directing all of the Respondents (the Respondents named in the Original Order and the Respondents added in this Amended Order) to perform those activities set forth in the Original SOW that have not been performed to date and to perform other Remedial Design investigative activities and, if necessary, other response actions. The Work required under this Amended Order is set forth in the Amended SOW, which is Attachment 2 to this Amended Order.

The schedule and list of deliverables under the Original Order and this Amended Order are set forth in Attachment 3 to this Amended Order. The following deliverables, required but either not yet submitted or only partially completed under the Original Order, continue to be required under the Amended Order: RD-7 (Community Contingency Plan, to be included as an attachment to the Health and Safety Plan), RD-18 (Pre-Final (90%) Design), RD-19 (Final (100%) Design), and RD-20 (Site Access Agreements for the RD investigative activities under this Amended Order). The following new deliverables are required under the Amended Order: RD-24 (Notice of Intent to Comply with Amended Order); RD-25 (Revised Quality Assurance Project Plan); RD-26 (Revised Field Sampling and Analysis Plan); RD-27 (RD Investigative Activities Workplan); RD-28 (Subsurface Gas Contingency Plan), for which, if requested by Respondents, EPA may, at its discretion, assume federal-lead; RD-29 (Comprehensive Subsurface Gas Quarterly Monitoring Plan); RD-30 (Comprehensive Groundwater Quarterly Monitoring Plan); RD-31 (Final RD Investigative Summary Report/ Alternatives Analysis for Subsurface Gas and Soils); RD-32 (Final Groundwater Investigative Summary Report/Feasibility Study); RD-33 (Engineering Certification of Completion of All Work Under the Amended Order); RD-34 (Records Preservation Notice for Amended Order); and RD-35 (Additional Technical Memoranda), if necessary.

41. Respondents shall cooperate with EPA in providing information regarding the Work to the public. As requested by EPA, Respondents shall participate in the preparation of such information for distribution to the public and presentation of information in public meetings which may be held or sponsored by EPA to explain activities at or relating to the Site. Comments and concerns will be solicited during any public meetings, and these comments and concerns will be considered during, and incorporated into, the design of the remedy to the extent possible.

42. All aspects of the Work to be performed by Respondents pursuant to this Amended Order shall be performed by qualified employees or contractors of Respondents under the direction and supervision of a qualified project coordinator ("Project Coordinator"). Respondents under the Original Order selected, and EPA approved, a Project Coordinator. Unless EPA is notified of the selection of a new Project Coordinator within fifteen (15) days after the effective date of this Amended Order, the Project Coordinator originally selected shall continue to serve in that role. If Respondents wish to change the Project Coordinator, Respondents shall provide written notice to EPA, five (5) days prior to changing the Project Coordinator, of the name and qualifications of the new Project Coordinator. Respondents' selection of a new Project Coordinator shall be subject to EPA approval.

43. All aspects of the Work to be performed by Respondents pursuant to this Amended Order shall be performed by qualified employees or contractors of Respondents. The Respondents under the Original Order selected, and EPA approved, a remedial design contractor ("design contractor"). Unless EPA is notified of the selection of a new design contractor within fifteen (15) days after the effective date of this Amended Order, the design contractor originally selected shall continue to serve in that role.

44. If Respondents wish to change the design contractor, Respondents shall provide written notice to EPA, five (5) days prior to changing the design contractor, of the name and qualifications of the new design contractor, including primary design personnel (if known), support entities and staff, and the names of the principal subcontractors (including laboratories) proposed to be used in carrying out Work under this Amended Order. Respondents' selection of a new design contractor shall be subject to EPA approval. Respondents must ensure that all

portions of the Work shall be performed (not merely reviewed) by personnel qualified to perform those portions of the Work for which they are assigned. Respondents' selected contractor(s) shall have expertise in, at a minimum, design and implementation of remedial actions involving hazardous waste final covers, including landfill gas removal and treatment. EPA will review Respondents' selection of a new design contractor according to the terms of this paragraph and Section XII of this Amended Order. If EPA disapproves of the selection of the design contractor, Respondents shall submit to EPA, within 30 days after receipt of EPA's disapproval of the design contractor previously selected, a list of contractors, including primary support entities and staff, that would be acceptable to Respondents. EPA will thereafter provide written notice to Respondents of the names of the contractor firms that are acceptable to EPA. Respondents may then select any approved design contractor firm from that list and shall notify EPA of the name of the design contractor selected within twenty-one (21) days of EPA's designation of approved design contractors. If at any time Respondents propose to use a different design contractor, Respondents shall notify and obtain approval from EPA before the new design contractor performs any Work under this Amended Order.

45. A Remedial Design Work Plan (RD-5) was submitted to EPA on October 27, 1994 and approved by EPA on April 12, 1995. Any violations of the RD Work Plan (RD-5), and any amendments and or revisions thereto, shall be a violation of this Amended Order.

46. A Preliminary (30%) Design (RD-16) and an Intermediate (60%) Design (RD-17) were submitted to EPA as one deliverable on October 16, 1995 and approved by EPA on March 13, 1996.

47. A Pre-final (90%) Design (RD-18) initially was submitted on April 13, 1996. EPA submitted comments and requested revisions to RD-18 on November 1, 1996. Resubmittal of a revised RD-18 is

deferred until Remedial Design investigative activities are completed and the data has been evaluated. A Pre-final (90%) Design (RD-18) will be revised and resubmitted to EPA within 30 days after EPA approval of Final RD Investigative Summary Report (RD-31).

48. Within thirty (30) days from the date this Amended Order is signed by EPA, Respondents shall submit a RD Investigative Activities Workplan (RD-27), which will incorporate the latest revisions to Technical Memorandum (TM) #4 (Subsurface Gas and Soils) and TM #5 (Groundwater), to EPA and the other agencies for review and comment, and for approval by EPA. The Workplan shall include RD investigative activities, including installation of new gas monitoring wells and probes, and other response actions related to subsurface soil gases. The major tasks and deliverables described in the Workplan shall include, but not be limited to, the following: (1) performance of pilot treatability/demonstration studies (e.g., soil vapor extraction, air injection, solidification with concrete, etc.); (2) installation of a vapor well and probe monitoring network both within the site and on the perimeter; (3) sampling of subsurface gas wells and probes; (4) characterization of the extent of subsurface gas for perimeter compliance; (5) design or redesign of gas collection system(s) in and around the reservoir and around on-site buildings; (6) validation of risk-based action levels; (7) implementation of indoor air monitoring for methane and, if necessary, volatile organic compounds (VOCs); and (8) implementation of engineering remedies, if concentrations exceed action levels for VOCs. The Workplan also shall include groundwater investigative activities, including, if necessary, construction of additional groundwater wells. The Workplan shall describe the tasks and deliverables Respondents will complete and include a schedule for completing the tasks and deliverables.

49. Within forty-five (45) days after the effective date of this Amended Order, Respondents shall submit a Comprehensive Subsurface Gas Quarterly Monitoring Plan (RD-29), for commencing quarterly (or more frequent) subsurface gas monitoring, to EPA and the other agencies for review and comment, and for approval by EPA. The Monitoring Plan shall describe the tasks and deliverables Respondents will complete and include a schedule for completing the tasks and deliverables.

50. Within forty-five (45) days after the effective date of this Amended Order, Respondents shall submit a Comprehensive Groundwater Quarterly Monitoring Plan (RD-30), for commencing quarterly (or more frequent) groundwater monitoring, to EPA and the other agencies for review and comment, and for approval by EPA. The Monitoring Plan shall describe the tasks and deliverables Respondents will complete and include a schedule for completing the tasks and deliverables.

51. Upon approval by EPA, the RD Investigative Activities Workplan (RD-27), the Comprehensive Subsurface Gas Quarterly Monitoring Plan (RD-29), and the Comprehensive Groundwater Quarterly Monitoring Plan (RD-30) are incorporated into this Amended Order as a requirement of this Amended Order and shall be an enforceable part of this Amended Order.

52. Upon approval of the RD Investigative Activities Workplan (RD-27), the Comprehensive Subsurface Gas Quarterly Monitoring Plan (RD-29), and the Comprehensive Groundwater Quarterly Monitoring Plan (RD-30), Respondents shall implement these documents, and any amendments or revisions thereto, in accordance with the schedules contained therein.

53. Upon completion of the tasks described in the RD Investigative Activities Workplan (RD-27), the Respondents shall incorporate the data, analyses and other results of those

Technical Memoranda into a revised Pre-final (90%) Design (RD-18) deliverable. Any violations of the RD Investigative Activities Workplan (RD-27), and any amendments and or revisions thereto, shall be a violation of this Amended Order.

54. Within thirty (30) days of completion of the tasks required under the RD Investigative Activities Workplan (RD-27), Respondents shall submit a Final Investigative Summary Report/Alternatives Analyses for Subsurface Gas and Soils (RD-31).

55. During the RD investigative activities phase, a Subsurface Gas Contingency Plan (RD-28) shall be prepared for conducting indoor air monitoring for methane and, if needed, other volatile organic compounds. The Plan also will include other needed investigative activities and implementation of engineering remedies for on-site buildings, if concentrations exceed EPA interim action levels or State standards. If requested by Respondents or at EPA's discretion, EPA may assume federal-lead for this task (RD-28), or any portions thereof.

56. After review and approval by EPA of the Final RD Investigative Summary Report/Alternatives Analysis for Subsurface Gas and Soils (RD-31), Respondents shall incorporate the data, analyses and other results from the EPA approved Report into a revised Pre-final (90%) Design (RD-18), and Respondents shall submit the revised Pre-final (90%) Design deliverable (RD-18) to EPA for review and comment. The revised Pre-final (90%) Design shall address all comments generated from the Intermediate (60%) Design (RD-16/17) and the original Pre-final (90%) Design, and all elements identified in this Amended Order and the Amended SOW.

57. Upon the request of the EPA Project Manager, additional technical memoranda (RD-35) may be required to complete

additional tasks or studies related to completion of the remedial design.

58. Based on the schedule in RD Investigative Activities Workplan (RD-27) and the results of the RD investigative activities, Respondents shall submit a Final (100%) Design (RD-19) for Subsurface Gas and Soils to EPA for review and approval. The Final Design submittal shall address, at a minimum, the elements identified in the Amended SOW, and shall incorporate all comments generated from the Pre-final (90%) Design review.

59. Based on the schedule in RD Investigative Activities Workplan (RD-27) and the results of the groundwater monitoring conducted under the Comprehensive Groundwater Quarterly Monitoring Plan (RD-30), Respondents shall submit a Final Groundwater Investigative Summary Report/Feasibility Study (RD-32) summarizing the groundwater data, and discussing remedial alternatives, including the feasibility of the selected alternative for ensuring the site poses no potential risk to groundwater.

60. Within thirty (30) days after Respondents conclude that all phases of the Work required by this Amended Order have been fully performed, Respondents shall submit to EPA a written certification by a registered professional engineer stating that the Work has been completed in full satisfaction of the requirements of the Amended Order (RD-34). EPA may require such additional activities as it determines to be necessary to complete the Work (including any activities deemed necessary to assess whether the Work has been completed) or EPA may, based upon present knowledge and Respondents' certification to EPA, issue written notification to Respondents that the Work required by this Amended Order has been completed. EPA's notification shall not limit EPA's right to take or require any action that in

the judgment of EPA is appropriate at the Site, in accordance with 42 U.S.C. §9604, 9606, or 9607.

X. OTHER RESPONSE ACTIONS

61. EPA may determine that in addition to the Work identified in this Amended Order and attachments to this Amended Order, other response actions may be necessary to protect human health and the environment. If EPA determines that other response actions are necessary, EPA may require Respondents to submit a work plan for other response actions. EPA may also require Respondents to modify any plan, design, or other deliverable required by this Amended Order, including any approved deliverables or modifications.

62. Not later than thirty (30) days after receiving EPA's notice that other response actions are required pursuant to this Section, Respondents shall submit a work plan for the response actions to EPA, DTSC, and Other Agencies as specified by the EPA Project Manager, for review and comment, and for approval by EPA. Upon approval by EPA, the work plan is incorporated into this Amended Order as a requirement of this Amended Order and shall be an enforceable part of this Amended Order. Upon approval of the work plan by EPA, Respondents shall implement the work plan according to the standards, specifications, and schedule in the approved work plan. Respondents shall notify EPA of their intent to perform such additional response activities within seven (7) days after receipt of EPA's request for other response actions.

XI. ENDANGERMENT AND EMERGENCY RESPONSE

63. In the event of any action or occurrence during the performance of the Work which causes or threatens to cause a release of a hazardous substance or which may present an immediate threat to public health or welfare or the environment, Respondents shall immediately take all appropriate action to prevent, abate, or minimize the threat, and shall immediately

notify EPA's Project Manager, or, if the Project Manager is unavailable, Respondents shall notify the EPA Emergency Response Unit, Region 9, at (415) 744-2000. Respondents shall take such action in consultation with EPA's Project Manager and in accordance with all applicable provisions of this Amended Order, including but not limited to the Health and Safety Plan and the Contingency Plan, pursuant to this Amended Order. In the event that Respondents fail to take appropriate response action as required by this Section, and EPA takes that action instead, Respondents shall reimburse EPA for all costs of the response action not inconsistent with the NCP. Respondents shall pay the response costs in the manner described in Section XXII of this Amended Order, within thirty (30) days of Respondents' receipt of demand for payment and a certified EPA financial cost summary of the costs incurred.

64. Nothing in the preceding paragraph shall be deemed to limit any authority of the United States or the State to take, direct, or order all appropriate action to protect human health and the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances on, at, or from the Site.

XII. EPA REVIEW OF SUBMISSIONS

65. All deliverables shall be submitted concurrently to EPA, DTSC, and Other Agencies, as specified by the EPA Project Manager. EPA will prepare coordinated comments on the deliverables submitted by the Respondents. All comments received from DTSC and Other Agencies will be included, if received by EPA in a timely manner. After review of any deliverable, plan, report or other item which is required to be submitted for review and approval pursuant to this Amended Order, EPA may: (a) approve the submission; (b) approve the submission with modifications; (c) disapprove the submission and direct Respondents to re-submit the document after incorporating EPA's comments; or (d)

disapprove the submission and assume responsibility for performing all or any part of the response action. As used in this Amended Order, the terms "approval by EPA," "EPA approval," or a similar term means the action described in items (a) or (b) of this paragraph.

66. In the event of approval or approval with modifications by EPA, Respondents shall proceed to take any action required by the plan, report, or other item, as approved or modified by EPA. For documents that are approved with modifications and are part of an iterative process (for example, an intermediate design document that is scheduled for update in the pre-final design), the modification is expected to be included in the next iteration, and should not be resubmitted to EPA, unless otherwise directed by EPA in its notification.

67. Upon receipt of a notice of disapproval, Respondents shall, within ten (10) days or such longer time as specified by EPA in its notice of disapproval, correct the deficiencies and resubmit the plan, report, or other deliverable for approval. Notwithstanding the notice of disapproval, Respondents shall proceed, at the direction of EPA, to take any action required by any non-deficient portion of the submission.

68. Submission of a deficient plan, report, or other deliverable or failure to submit a plan, report, or other deliverable shall be considered a violation of this Amended Order. An approval by EPA pursuant to paragraph 65 above of an initially disapproved submission shall cure the applicable violation.

XIII. PROGRESS REPORTS

69. In addition to the other deliverables set forth in this Amended Order, Respondents shall provide monthly progress reports describing actions and activities undertaken during the preceding month and planned to be undertaken in the future, pursuant to

this Amended Order. The monthly progress report also shall include a compliance schedule, updated on a monthly basis, for this Amended Order. The monthly progress reports shall be submitted on or before the fifteenth (15th) day of each month following the effective date of this Amended Order. Respondents' obligation to submit progress reports continues until EPA gives Respondents written notice to discontinue progress reports, or report on a less frequent basis. In addition to the monthly updated compliance schedule, at a minimum, these progress reports shall: (1) describe the actions which have been taken to comply with this Amended Order during the prior month; (2) include all results of sampling and tests and all other data received by Respondents and not previously submitted to EPA; (3) describe all work planned for the next several months, including updated schedules, as needed, and relating work to the overall project schedule for Remedial Design; and (4) describe all problems encountered and any anticipated problems, any actual or anticipated delays, and solutions developed and implemented.

XIV. QUALITY ASSURANCE, SAMPLING AND DATA ANALYSIS

70. Respondents shall use the quality assurance, quality control, and chain of custody procedures described in the "EPA National Enforcement Investigation Center (NEIC) Policies and Procedures Manual," May 1978, revised August 1991; EPA-330/9-78-001-R, EPA's "Guidelines and Specifications for Preparing Quality Assurance Program Plans" (EPA 600/8-83-024, 1983), EPA's "Data Quality Objective Process for Superfund" (EPA 540-R-93-071), "Guidance for Planning for Data Collection in Support of Environmental Decision Making Using the Data Quality Objectives Process" (EPA Q/G-4, Interim Final, October 6, 1993), "US EPA Region 9 Guidance for Preparing Quality Assurance Project Plans for Superfund Remedial Projects" (9QA-03-89, September 1989), "EPA Requirements for Quality Management Plans" (EPA Q/R-2, Interim Final, May 1994), "EPA Requirements for Quality Assurance Project Plans for Environmental Data Operations" (EPA Q/R-5,

Interim Final, May 1994), and any amendments to these documents, while conducting all sample collection and analysis activities required herein by any plan. To provide quality assurance and maintain quality control, Respondents shall:

A. Use only laboratories which have a documented Quality Assurance Program that complies with EPA guidance document QAMS-005/80.

B. Ensure that the laboratory used by the Respondents for analyses performs according to a method or methods deemed satisfactory to EPA and submits all protocols to be used for analyses to EPA at least 45 days before beginning analysis.

C. Ensure that EPA personnel and EPA's authorized representatives are allowed access to the laboratory and personnel utilized by the Respondents for analyses.

71. Respondents shall notify EPA not less than fourteen (14) days in advance of any sample collection activity. At the request of EPA, DTSC, or Other Agencies, Respondents shall allow split or duplicate samples to be taken by EPA, DTSC, or Other Agencies, including their authorized representatives, of any samples collected by Respondents with regard to the Site or pursuant to the implementation of this Amended Order. In addition, EPA, DTSC and Other Agencies shall have the right to take any additional samples that EPA deems necessary.

XV. COMPLIANCE WITH APPLICABLE LAWS

72. All activities by Respondents pursuant to this Amended Order shall be performed in accordance with the requirements of all Federal and state laws and regulations. EPA has determined that the activities contemplated by this Amended Order are consistent with the NCP.

73. Except as provided in section 121(e) of CERCLA and the NCP, no permit shall be required for any portion of the Work conducted entirely on-Site. Where any portion of the Work requires a

Federal or state permit or approval, Respondents shall submit timely applications and take all other actions necessary to obtain and to comply with all such permits or approvals.

74. This Amended Order is not, and shall not be construed to be, a permit issued pursuant to any Federal or state statute or regulation.

75. Nothing in this Amended Order shall be deemed to constitute a preauthorization of a CERCLA claim within the meaning of Sections 111 or 112 or CERCLA, 42 USC. Section 9611 or 9612, or 40 CFR Section 300.25(d).

XVI. EPA PROJECT MANAGER

76. (A) All communications, whether written or oral, from Respondents to EPA shall be directed to EPA's Project Manager. Respondents shall submit to EPA three (3) copies of all documents, including plans, reports, and other correspondence, which are developed pursuant to this Amended Order, and shall send these documents by overnight mail or by certified mail, return receipt requested. Respondents shall also submit one copy of each deliverable to the Project Managers for DTSC and the Other Agencies, as specified by the EPA Project Manager. Deliverables shall be submitted in accordance with the Amended SOW.

EPA's Project Manager is:

Andria Benner
US EPA Region 9
75 Hawthorne Street (SFD-7-1)
San Francisco, CA 94105
(415) 744-2361

(B) DTSC's Project Manager is:

Shahir Haddad
Cal-EPA Department of Toxic Substances Control
Site Mitigation Branch
1011 N. Grandview Avenue
Glendale, CA 91201

(C) One copy of each deliverable shall also be sent to EPA contractors, as specified by the EPA Project Manager.

77. EPA and DTSC have the unreviewable right to change their respective Project Managers. If EPA or DTSC changes its Project Manager, EPA or DTSC will inform Respondents in writing of the name, address, and telephone number of the new Project Manager.

78. EPA's Project Manager shall have the authority lawfully vested in a Project Manager and On-Scene Coordinator (OSC) by the National Contingency Plan, 40 C.F.R. Part 300. EPA's Project Manager shall have authority, consistent with the NCP, to halt any work required by this Amended Order, and to take any necessary other response action.

XVII. ACCESS TO SITE NOT OWNED BY RESPONDENTS

79. If the Site or any portion thereof that is to be used for access or for conducting activities under this Amended Order or the Amended SOW, any off-site area that is to be used for access or conducting any activities under this Amended Order or the Amended SOW, property where documents required to be prepared or maintained by this Amended Order are located, or other property subject to or affected by the clean up, is owned in whole or in part by parties other than those bound by this Amended Order, Respondents will obtain, or use their best efforts to obtain, Site access agreements or approvals from the present owners within sixty (60) days of the effective date of this Amended Order. Such agreements or approvals shall provide access for EPA, DTSC, and Other Agencies, including their respective authorized representatives and contractors, and Respondents or Respondents' authorized representatives and contractors. Such agreements shall specify that Respondents are not the representatives of EPA, DTSC, or Other Agencies, with respect to liability associated with Site activities. Respondents shall save and hold harmless the United States and its officials,

agents, employees, contractors, subcontractors, or representatives for or from any and all claims or causes of action or other costs incurred by the United States including but not limited to attorney's fees and other expenses of litigation and settlement arising from or on account of acts or omissions of Respondents, their officers, directors, employees, agents, contractors, subcontractors, and any persons acting on their behalf or under their control, in carrying out activities pursuant to this Amended Order, including any claims arising from any designation of Respondents as EPA's authorized representatives under section 104(e) of CERCLA. Copies of such agreements or approvals shall be provided to EPA, DTSC, and Other Agencies, prior to Respondents' initiation of field activities on the property for which such agreement or approval is applicable (RD-20). Respondents' best efforts shall include providing reasonable compensation to any off-site property owner. If access agreements are not obtained within the time referenced above, Respondents shall immediately notify EPA of its failure to obtain access. Subject to the United States' non-reviewable discretion, EPA may use its legal authorities to obtain access for the Respondents, may perform those response actions with EPA contractors at the property in question, or may terminate the Amended Order if Respondents cannot obtain access agreements. If EPA performs those tasks or activities with contractors and does not terminate the Amended Order, Respondents shall perform all other activities not requiring access to that property, and shall reimburse EPA, pursuant to Section XXII of this Amended Order, for all costs incurred in performing such activities. Respondents shall integrate the results of any such tasks undertaken by EPA into its reports and deliverables. Respondents shall reimburse EPA, pursuant to Section XXII of this Amended Order, for all response costs (including attorney's fees) incurred by the United States to obtain access for Respondents.

XVIII. SITE ACCESS AND DATA/DOCUMENT AVAILABILITY

80. Respondents shall allow EPA, DTSC, and Other Agencies, including their authorized representatives and contractors, to enter and freely move about all property at the Site and off-site areas subject to or affected by the Work under this Amended Order or where documents required to be prepared or maintained by this Amended Order are located, for the purposes of inspecting conditions, activities, the results of activities, records, operating logs, and contracts related to the Site or Respondents and their representatives or contractors pursuant to this Amended Order; reviewing the progress of the Respondents in carrying out the terms of this Amended Order; conducting tests as EPA or its authorized representatives or contractors deem necessary, using a camera, sound recording device or other documentary type equipment; and verifying the data submitted to EPA by Respondents. Respondents shall allow EPA, DTSC, and Other Agencies, including their authorized representatives, to enter the Site, to inspect and copy all records, files, photographs, documents, sampling and monitoring data, and other writings related to work undertaken in carrying out this Amended Order. Nothing herein shall be interpreted as limiting or affecting the right of entry or inspection authority under Federal or state law of EPA, DTSC and Other Agencies.

81. Respondents may assert a claim of business confidentiality covering part or all of the information submitted to EPA pursuant to the terms of this Amended Order under 40 C.F.R. § 2.203, provided such claim is not inconsistent with section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7), or other provisions of law. This claim shall be asserted in the manner described by 40 C.F.R. § 2.203(b) and substantiated by Respondents at the time the claim is made. Information determined to be confidential by EPA will be given the protection specified in 40 C.F.R. Part 2. If no such claim accompanies the information when it is submitted to EPA, that information may be made available to the public by EPA,

DTSC, or Other Agencies without further notice to the Respondents. Respondents shall not assert confidentiality claims with respect to any data related to Site conditions, sampling, or monitoring.

82. Respondents shall maintain for the period during which this Amended Order is in effect an index of documents that Respondents claim contain confidential business information. The index shall contain, for each document, the date, author, addressee, and subject of the document. Upon written request from EPA, Respondents shall submit a copy of the index to EPA.

XIX. RECORD PRESERVATION

83. Respondents shall provide to EPA upon request copies of all documents and information within their possession and/or control or that of their contractors or agents relating to activities at the Site or to the implementation of this Amended Order, including but not limited to sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, and other documents or information related to the Work. Respondents shall also make available to EPA for purposes of investigation, information gathering, or testimony, their employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work.

84. Until six (6) years after EPA provides notice pursuant to paragraph 60 that all work required under this Amended Order has been completed, each Respondent shall preserve and retain all records and documents in its possession or control, including the documents in the possession or control of their contractors and agents on and after the effective date of this Amended Order that relate in any manner to the Site. At the conclusion of this document retention period, Respondents shall notify EPA and DTSC at least ninety (90) calendar days prior to the destruction of

any such records or documents, and upon the request of EPA, Respondents shall deliver any such records or documents to EPA.

85. Within forty-five (45) days after the effective date of this Amended Order and except as otherwise provided in this paragraph, Respondents shall submit a written certification (RD-34) to EPA that they have not altered, mutilated, discarded, destroyed or otherwise disposed of any records, documents or other information relating to their potential liability with regard to the Site since notification of potential liability by the United States or the State or the filing of suit against it regarding the Site. Respondents who provided such written certification to EPA pursuant to the Original Order need not resubmit such certification. Respondents shall not dispose of any such documents without prior approval by EPA. Respondents shall, upon EPA's request and at no cost to EPA, deliver the documents or copies of the documents to EPA.

XX. DELAY IN PERFORMANCE

86. Any delay in performance of this Amended Order that, in EPA's judgment, is not properly justified by Respondents under the terms of this section shall be considered a violation of this Amended Order. Any delay in performance of this Amended Order shall not affect Respondents' obligations to fully perform all obligations under the terms and conditions of this Amended Order.

87. Respondents shall notify EPA of any delay or anticipated delay in performing any requirement of this Amended Order. Such notification shall be made by telephone to EPA's Project Manager within four (4) days after Respondents first know or should have known that a delay might occur. Respondents shall adopt all reasonable measures to avoid or minimize any such delay. Within five (5) days after notifying EPA by telephone, Respondents shall provide written notification to EPA, DTSC, and Other Agencies, specified by EPA Project Manager, fully describing the nature of

the delay, any justification for delay, any reason why Respondents should not be held strictly accountable for failing to comply with any relevant requirements of this Amended Order, the measures planned and taken to minimize the delay, and a schedule for implementing the measures that will be taken to mitigate the effect of the delay. Increased costs or expenses associated with implementation of the activities called for in this Amended Order are not a justification for any delay in performance.

XXI. ASSURANCE OF ABILITY TO COMPLETE WORK

88. Respondents shall demonstrate the ability to complete the Work required by this Amended Order and to pay all claims that arise from the performance of the Work. The Respondents to the Original Order have provided one of the following: (1) a performance bond; (2) a letter of credit; (3) a guarantee by a third party; or (4) internal financial information to allow EPA to determine that one or more of the Respondents have sufficient assets available to perform the Work under the Original Order. This documentation also constitutes sufficient evidence of financial assurance for the work to be performed under this Amended Order. If EPA determines that such financial information is inadequate, Respondents shall, within thirty (30) days after receipt of EPA's notice of determination, obtain and present to EPA for approval one of the other three forms of financial assurance listed above.

89. Respondents shall submit to EPA a certification that Respondents or their contractors and subcontractors have adequate insurance coverage or have indemnification for liabilities for injuries or damages to persons or property which may result from the activities to be conducted by or on behalf of Respondents. Under the Original Order, the Respondents have provided such certification of insurance or indemnification for liabilities for the Respondent's contractor (RD-23). Respondents shall ensure

that such insurance or indemnification is maintained for the duration of the Work required by this Amended Order.

XXII. REIMBURSEMENT OF RESPONSE COSTS

90. Respondents shall reimburse EPA, upon written demand, for all response costs incurred by the United States in overseeing Respondents' implementation of the requirements of the Original Order, this Amended Order, and any response action which Respondents fail to perform in compliance with this Amended Order. EPA may submit to Respondents on a periodic basis an accounting of all response costs incurred by the United States with respect to this Amended Order. EPA's certified Agency Financial Management System summary data, or such other summary as certified by EPA, shall serve as basis for payment demands.

91. Respondents shall, within thirty (30) days of receipt of each EPA written demand letter, remit a certified or cashier's check for the amount of those costs. Interest shall accrue from the later of the date that payment of a specified amount is demanded in writing or the date of the expenditure. The interest rate is the rate established by the Department of the Treasury pursuant to 31 U.S.C. § 3717 and 4 C.F.R. § 102.13.

92. Checks shall be made payable to the Hazardous Substances Superfund and shall include the name of the Site, the Site identification number, the account number and the title of this Order. Checks shall be forwarded to:

U.S. Environmental Protection Agency - Region 9
ATTENTION: Superfund Accounting
PO Box 360863M
Pittsburgh, PA 15251

The Site identification number is "CAD980884357"; the account number is "9 C1". Electronic payments may be made in accordance with instructions provided by EPA.

93. Respondents shall send copies of each transmittal letter and check to the EPA Project Manager and the cost recovery specialist indicated in the demand letter.

XXIII. UNITED STATES NOT LIABLE

94. The United States, by issuance of this Amended Order, assumes no liability for any injuries or damages to persons or property resulting from acts or omissions by Respondents, or their directors, officers, employees, agents, representatives, successors, assigns, contractors, or consultants in carrying out any action or activity pursuant to this Amended Order or pursuant to the Original Order. Neither EPA, the United States, the State, nor DTSC may be deemed to be a party to any contract entered into by Respondents or their directors, officers, employees, agents, successors, assigns, contractors, or consultants in carrying out any action or activity pursuant to this Amended Order or pursuant to the Original Order.

XXIV. ENFORCEMENT AND RESERVATIONS

95. EPA and DTSC reserve the right to bring an action against Respondents under section 107 of CERCLA, 42 U.S.C. § 9607, or under applicable State law, for recovery of any response costs incurred by the United States or the State related to the Original Order or this Amended Order and not reimbursed by Respondents, or for any other unreimbursed past or future costs incurred by the United States or the State in connection with response activities conducted at the Site. This reservation shall include but not be limited to past costs, direct costs, indirect costs, the costs of oversight, the costs of compiling the cost documentation to support oversight cost demand, as well as accrued interest as provided in section 107(a) of CERCLA.

96. Notwithstanding any other provision of this Amended Order, at any time during the response action, EPA may perform its own studies, complete the response action (or any portion of the response action) as provided in CERCLA and the NCP, and seek reimbursement from Respondents for its costs, or seek any other appropriate relief.

97. Nothing in this Amended Order shall preclude EPA or DTSC from taking any additional enforcement actions, including modification of this Amended Order or issuance of additional Orders, and/or additional remedial or removal actions as EPA or DTSC may deem necessary, or from requiring Respondents in the future to perform additional activities pursuant to CERCLA, 42 U.S.C. § 9601, et seq., or any other applicable law. Respondents shall be liable under CERCLA section 107(a), 42 U.S.C. § 9607(a), for the costs of any such additional actions.

98. Notwithstanding any provision of this Amended Order, the United States hereby retains all of its information gathering, inspection and enforcement authorities and rights under CERCLA, RCRA and any other applicable statutes or regulations.

99. Respondents shall be subject to civil penalties under section 106(b) of CERCLA, 42 U.S.C. § 9606(b), of not more than $25,000 for each day in which Respondents willfully violates, or fails or refuses to comply with this Amended Order without sufficient cause. In addition, failure to properly provide response action under this Amended Order, or any portion hereof, without sufficient cause, may result in liability under section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3), for punitive damages in an amount at least equal to, and not more than three times the amount of, any costs incurred by the Fund as a result of such failure to take proper action.

100. Nothing in this Amended Order shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person for any liability it may have arising out of or relating in any way to the Site.

101. If a court issues an order that invalidates any provision of this Amended Order or finds that Respondents have sufficient cause not to comply with one or more provisions of this Amended Order, Respondents shall remain bound to comply with all provisions of this Amended Order not invalidated by the court's order.

XXV. ADMINISTRATIVE RECORD

102. Upon request by EPA, Respondents must submit to EPA all documents related to the work under this Amended Order for possible inclusion in the administrative record file.

XXVI. EFFECTIVE DATE AND COMPUTATION OF TIME

103. This Amended Order, Docket No. 97-09, supercedes the Original Order, Docket No. 94-17, signed August 18, 1994

104. This Amended Order shall be effective twelve (12) days after the Amended Order is signed by the Director of the Superfund Division, U.S. EPA Region 9. All times for performance of ordered activities shall be calculated from this effective date.

XXVII. OPPORTUNITY TO CONFER

105. With respect to the actions required by this Amended Order, Respondents may have a conference with EPA on April 16, 1997, at 9:30 a.m., at the following location: U.S. EPA, Region IX, 75 Hawthorne Street, American Samoa/Guam Rooms, San Francisco, California.

106. The purpose and scope of the conference shall be limited to issues involving the implementation of the response actions

required by this Amended Order and the extent to which Respondents intend to comply with this Amended Order. This conference is not an evidentiary hearing, and does not constitute a proceeding to challenge this Amended Order. It does not give Respondents a right to seek review of this Amended Order, or to seek resolution of potential liability, and no official stenographic record of the conference will be made. Respondents may appear in person or by an attorney or other representative.

So Ordered, this 31st day of March, 1997.

BY: Keith Takata

Keith Takata
Director, Superfund Division
U.S. Environmental Protection Agency, Region 9

ATTACHMENT 1

WASTE DISPOSAL, INC.

SOIL AND SUBSURFACE GAS OPERABLE UNIT

RECORD OF DECISION

Waste Disposal, Inc. Superfund Site

Santa Fe Springs, California

United States Environmental Protection Agency
Region 9 - San Francisco, California

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Record of Decision for Waste Disposal, Inc. Superfund Site
Santa Fe Springs, California

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PART I DECLARATION FOR THE RECORD OF DECISION

1.0 Site Name and Location

Waste Disposal, Incorporated (CERCLIS ID #CAD980884357)
Los Nietos Road at Greenleaf Avenue
Santa Fe Springs, California

2.0 Statement of Basis and Purpose

This decision document presents the selected remedial action for the Waste Disposal, Inc. site in Santa Fe Springs, California, which was chosen in accordance with CERCLA, as amended by SARA, and, to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan. This decision is based on the Administrative Record for this site.

The State of California agrees with the selected remedy.

3.0 Assessment of the Site

Actual or threatened releases of hazardous substances from the site, if not addressed by implementing the response action selected in this Record of Decision, may present an imminent and substantial endangerment to public health, welfare, or the environment.

4.0 Description of the Remedy

This operable unit is the first of two planned operable units for the site. An operable unit is a discrete portion of a response action under CERCLA. The first operable unit addresses contaminated soil and subsurface gases. This action addresses the principal threat at the site, which is exposure to contaminated soil, through containment and institutional controls.

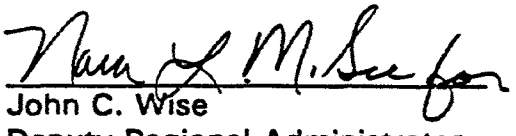
The major components of the selected remedy include:

- Consolidation of contaminated soil beneath a multilayered, RCRA-equivalent cap
- Capping approximately 17 acres of the 43-acre site with above mentioned cap (approximately 75% asphalt, 25% vegetation top cover);
- Extraction and treatment by flaring of subsurface gases, if necessary;
- Institutional controls that restrict future use of properties with residual contamination that pose an exposure risk; and
- Groundwater monitoring.

5.0 Statutory Determinations

The selected remedy is protective of human health and the environment, complies with Federal and State requirements that are legally applicable or relevant and appropriate to the remedial action, and is cost-effective. This remedy uses permanent solutions and alternative treatment (or resource recovery) technologies to the maximum extent practicable for this site. However, because treatment of the principal threat of the site was not found to be practicable, this remedy does not satisfy the statutory preference for treatment as a principal element. Because this remedy will result in hazardous substances remaining on-site above health-based levels, a review will be conducted within five years after commencement of the remedial action to ensure that the remedy continues to provide adequate protection of human health and the environment.

This ROD will be followed by another operable unit ROD which will address groundwater and the final remediation of the Site.



John C. Wise
Deputy Regional Administrator
United States Environmental Protection Agency
Region IX

12-27-93
Date

PART II DECISION SUMMARY

1.0 Site Name, Location, and Description

The Waste Disposal, Inc. (WDI) Superfund site is located in the city of Santa Fe Springs, Los Angeles County, California, on a 43-acre parcel of land. The facility is bordered on the northwest by Santa Fe Springs Road, on the northeast by Fedco Food Distribution Center (Fedco) and St. Paul High School, on the southwest by Lost Nietos Road, and on the southeast by Greenleaf Avenue (see Figure 1). Residences are located across from the facility on Greenleaf Avenue. The remaining areas on and across Los Nietos Road and Santa Fe Springs Road are occupied by industrial complexes.

2.0 Site History

The WDI site contains a 42 million gallon capacity concrete reservoir originally constructed for crude petroleum storage. The reservoir was decommissioned in the late 1920s for product storage, and was subsequently used for disposing of a variety of industrial wastes. Aerial investigations, records searches and previous site sampling indicate the surrounding grounds also were used as unlined sumps for disposal. Disposal activities continued unregulated until 1949, and thereafter under permit from Los Angeles County, until closure in 1964. Documentation on disposal was sporadic, but investigations have shown that drilling muds, sludges, tank bottoms, various industrial wastes, and construction debris and other solid wastes were disposed at WDI.

WDI stopped accepting wastes in 1964, bringing in fill and covering the site, including the reservoir. Across most of the site, between 5-15 feet of clean fill, cover the contaminated soil. However, several areas have contaminated surface soil (within the first five feet). Since 1966, when grading was completed, the site has been divided into multiple lots, and various businesses have developed on the site (see Figure 2). The area over the reservoir, however, is vacant, except for one small portion covered with an asphalt parking lot used for recreational vehicle storage.

3.0 Enforcement Activities

The site was placed on the National Priorities List (NPL) in July of 1987. After the site was listed, EPA sent General Notice Letters to 28 Potentially Responsible Parties (PRPs). The list included current and former property owners, generators, and transporters identified during the PRP Search. At that time, no party came forward with a good faith offer to conduct the Remedial Investigation (RI), so EPA began the RI. In 1988, EPA undertook a removal action, erecting a fence around

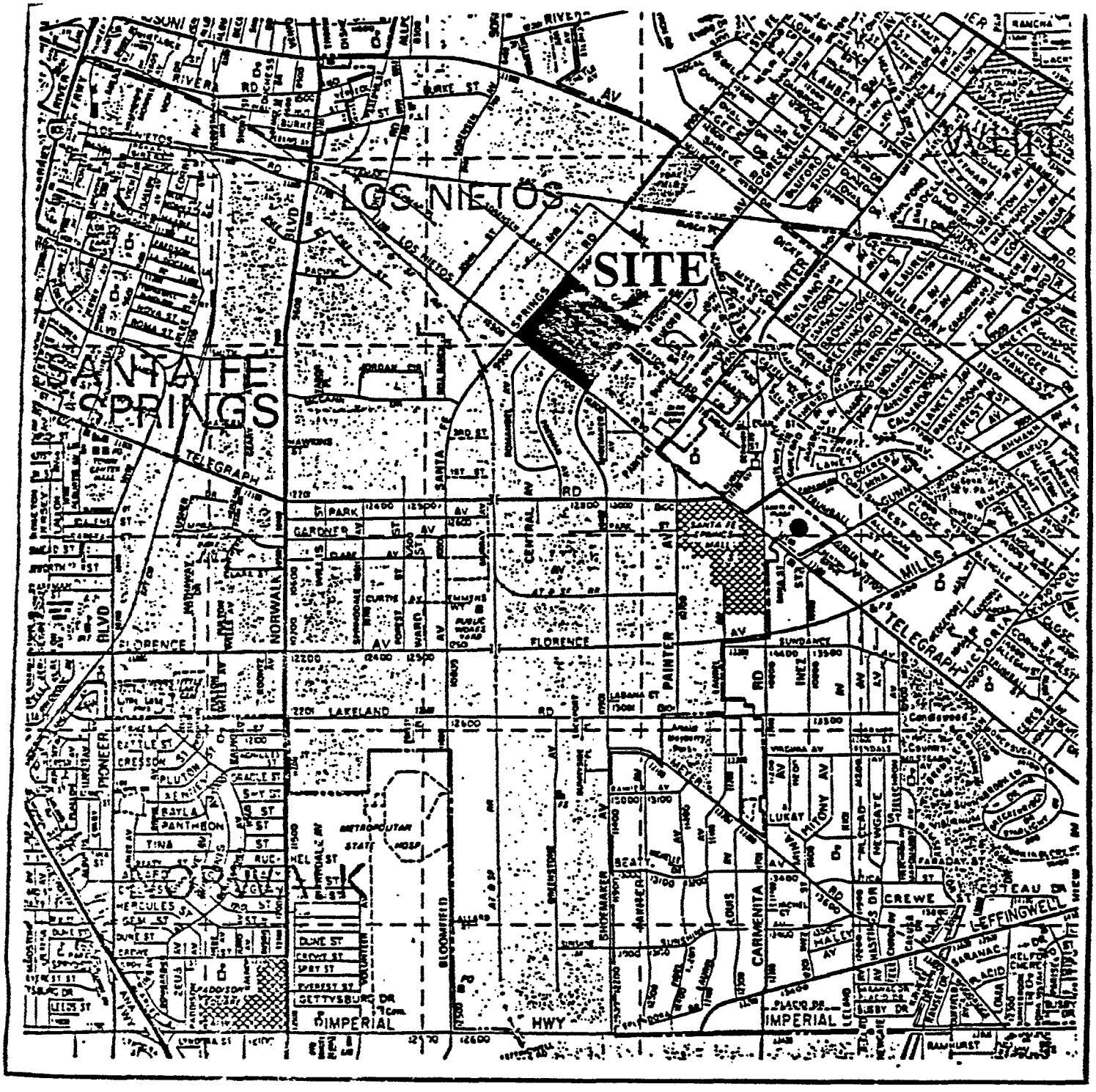


Figure 1 Site Location Map

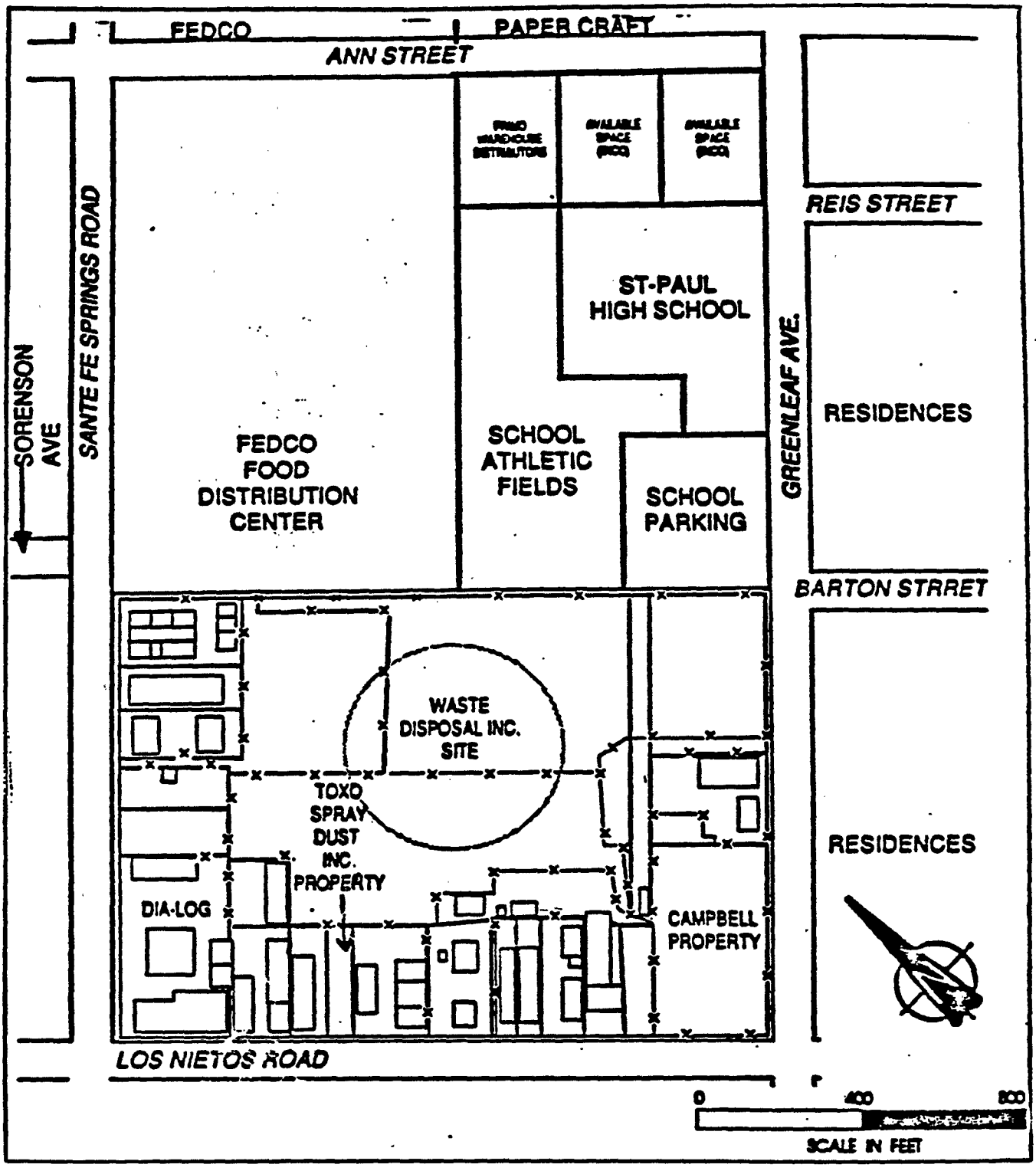


Figure 2 Facility Plan

one corner of the site to improve site security and prevent accidental exposure to surface contamination.

EPA completed the RI in November 1990, and initiated a Feasibility Study (FS). The State of California expressed reservations about the groundwater data, and suggested that EPA conduct further sampling. In January 1992, EPA began three quarters of groundwater monitoring, culminating in the January 1993 Groundwater Sampling Report. However, the data did not conclusively identify a source for groundwater contamination on site, and EPA decided to divide the site into two operable units so that more information could be collected for groundwater without delaying the decision for the remaining contaminated media. In August 1993, EPA completed the FS for contaminated soils and subsurface gases.

4.0 Highlights of Community Participation

EPA released the Proposed Plan for Contaminated Soil and Subsurface Gases to the public on August 12, 1993, at the same time making the Administrative Record available in the information repository maintained at the Santa Fe Springs City Library. EPA also mailed the Proposed Plan to interested individuals on the mailing list.

A public comment period was held from August 12, 1993 through October 31, 1993. This comment period included two extensions, one requested by the City of Santa Fe Springs and the second requested by a PRP. During the public comment period, EPA conducted a public meeting, held September 1, 1993 in Santa Fe Springs. At this meeting, representatives from EPA presented the Proposed Plan, answered questions about the site and the remedial alternatives under consideration, and accepted comments from the public. The notice of availability of the RI reports, FS, Proposed Plan, and the rest of the administrative record, the start of the comment period and the scheduled Public Meeting was published in both the *Los Angeles Times (Southeast Section Edition)* and the *Whittier Daily News* on August 12, 1993. EPA also published two additional notices in these papers announcing the extensions to the public comment period on September 23, 1993 and October 22, 1993.

In addition to the official Proposed Plan public meeting mentioned above, EPA presented its Proposed Plan to the Santa Fe Springs City Council on August 26, 1993 and the City Planning and Development Office on September 9, 1993. EPA also conducted an informative meeting for the parents of St. Paul High School, which is located adjacent to the site, on September 9, 1993.

During its meetings with the community, EPA heard from some members of the community that they felt overwhelmed by the Superfund process, and that without more time to think and study the information provided, they would not be able to

adequately understand the issues and provide their comments. EPA committed to more community involvement during the design process, so the community would have several more opportunities to provide input and make their feelings known. This open design process will require more public meetings than generally required during the design phase, but will ultimately lead to a remedy design that incorporates more input from both the public and the involved regulatory agencies that should be more acceptable to all concerned parties.

More of the community's concerns can be found in the transcript of the public meeting. EPA's responses can be found in the Responsiveness Summary, Part III of this ROD.

5.0 Scope and Role of Operable Unit

As with many Superfund sites, the contamination at the WDI site cover several environmental media, and each must be addressed in order to reduce the risks posed by the site. The work at WDI has been divided into two operable units (OUs). These are:

- OU One - Contaminated Soils and Subsurface Gas
- OU Two - Contamination in the Groundwater

The first OU is the subject of this ROD. More data will be collected before a decision will be made concerning contaminated groundwater found beneath the site.

6.0 Summary of Site Characteristics

Because the RI conducted by EPA is the most recent and extensive investigation to date, the site characteristics are based primarily on its findings. The Final Remedial Investigation Report of November 1989 (Ebasco), as well as the media-specific reports (available in the Administrative Record), should be referred to for a detailed description and analysis of contaminants found at the site.

The contamination present on-site at WDI exists in the soil and groundwater matrices, and in the form of subsurface gases. Present in on-site soils are large amounts of oil well drilling muds and sludges and waste products, metals, low concentrations of volatile organic compounds and semivolatile organic compounds, low concentrations of pesticides and PCBs, and lead. Methane is the most prevalent subsurface gas, with the highest concentrations in the reservoir area. Volatile organic compounds also were detected in the subsurface gas. Groundwater samples contained several metals in concentrations above MCLs, as well as volatile organic compounds. Because this ROD only covers soils and

subsurface gases, this document does not discuss groundwater characteristics in further detail.

The remedial investigation generated a large quantity of data, which can be found in the Final RI Report. Samples were taken at St. Paul High School to establish background levels. Background levels for the area established in the US Geologic Survey (USGS) Professional Paper 1270, *Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States*, have also been taken into account. The primary contaminants in soils at WDI are the drilling muds and oil-field wastes appearing as black oily material or tar-like sludge. The constituents of these wastes (in levels greater than those detected in the background) include:

- Metals - arsenic, beryllium, thallium, and lead
- Volatile Organic Compounds - toluene, methylene chloride, acetone, ethylbenzene, 2-butanone, and xylene
- Semivolatile Organic Compounds - benzo(a)pyrene, 2-chlorophenol, naphthalene, 2-methylnaphthalene, 4-nitrophenol, phenanthrene, chrysene, 1,4-dichlorobenzene, benzo(a)anthracene, anthracene, pyrene, phenanthrene, pentachlorophenol, and fluorene
- Pesticides - DDD, DDE, DDT, alpha- and gamma-chlordane, and dieldrin in surface soils
- PCBs in the surface soils

In the twenty six soil vapor monitoring wells, sampling revealed ten gases present in the subsurface. These gases were methane, benzene, 1,1,1-trichloroethane, 1,2-dibromoethane, 1,2-dicloroethane, carbon tetrachloride, chloroform, tetrachloroethane, trichloroethene, and vinyl chloride.

There are also barrels containing investigation derived wastes (mainly soils from the installation of wells). and barrels containing various debris and wastes from previous industrial activities. All of these will be addressed through this ROD.

7.0 Summary of Site Risks

The information on site risks is taken from the Final Endangerment Assessment of November 1989, with additional information provided in the Feasibility Study of August, 1993. These documents should be consulted if greater detail is needed.

Under current site conditions, possible exposure pathways consist of direct contact with contaminated surface soils and inhalation of airborne particulates and volatiles by students and nearby residents. The average risks, both cancer and non-cancer, are based on the average contaminant concentration for the site and a typical exposure scenario. The maximum risks are based on the highest concentrations observed at the site for each contaminant combined into one "composite sample"

that represents the source of contamination and the maximum plausible exposure scenario (even if the chance for exposure to the highest level of contamination is very small). The future risk scenario assumes an exposure to residents with homes built on the site, and no protective measures taken. This provides the maximum exposure scenario for which protective actions can be taken.

For the WDI site, the highest risks are posed by arsenic, thallium, benzene, pesticides, PCBs, and vinyl chloride. These risks for current exposure scenarios are almost within what EPA considers acceptable without any remedial action, but can pose an elevated threat to future users of the site. Arsenic presents the highest threat at the site, but is also found in background soils in the Santa Fe Springs area. The background levels, recognized by the US Geologic Survey as averaging 6.5 mg/kg and found in the background samples at 2.3 mg/kg, are within the EPA acceptable risk range for residential exposure. Some on-site samples, however, detected arsenic at significantly higher levels than background.

8.0 Description of Alternatives

The alternatives summarized here were presented in the Proposed Plan. A detailed evaluation of all the alternatives is presented in the Feasibility Study (FS) Report for Soils and Subsurface Gas dated August 2, 1993. (The FS, Proposed Plan, and the rest of the Administrative Record can be found at the Santa Fe Springs City Library on Telegraph Road.) Several alternatives were screened out prior to the nine-criteria analysis used to evaluate the alternatives presented in the Proposed Plan, including complete excavation and off-site disposal of contaminated soils, and on- and off-site incineration.

8.1 *Alternative 1: No Action*

The No Action alternative, required by the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 CFR 300.430(e)(6)), provides, among other things, an analysis of the risk posed by the facility if no remedial action is conducted. Therefore, it is used as a baseline alternative against which other alternatives are measured. With this alternative, there would be no reduction of toxicity, volume or mobility of the contaminants. The only actions that would take place would be re-seeding of any areas where vegetation was disturbed by on-site activities during the investigation, periodic monitoring required by CERCLA (because wastes will be left on-site), and five year reviews to evaluate site conditions over time.

8.2 *Alternative 2: Fencing, Revegetation, and Institutional Controls*

Site access would be restricted under this alternative. The site would be fenced to prevent direct contact with the contamination exposed at the site. The

perimeter fence along Greenleaf Avenue and St. Paul's High School would be augmented to a minimum height of seven feet and topped with barbed wire and razor ribbon to prevent access by trespassers. The rest of the perimeter fence would be inspected and repaired where necessary. Figure 3 shows the proposed fencing diagram for this alternative. Areas disturbed during the remedial investigation would be revegetated.

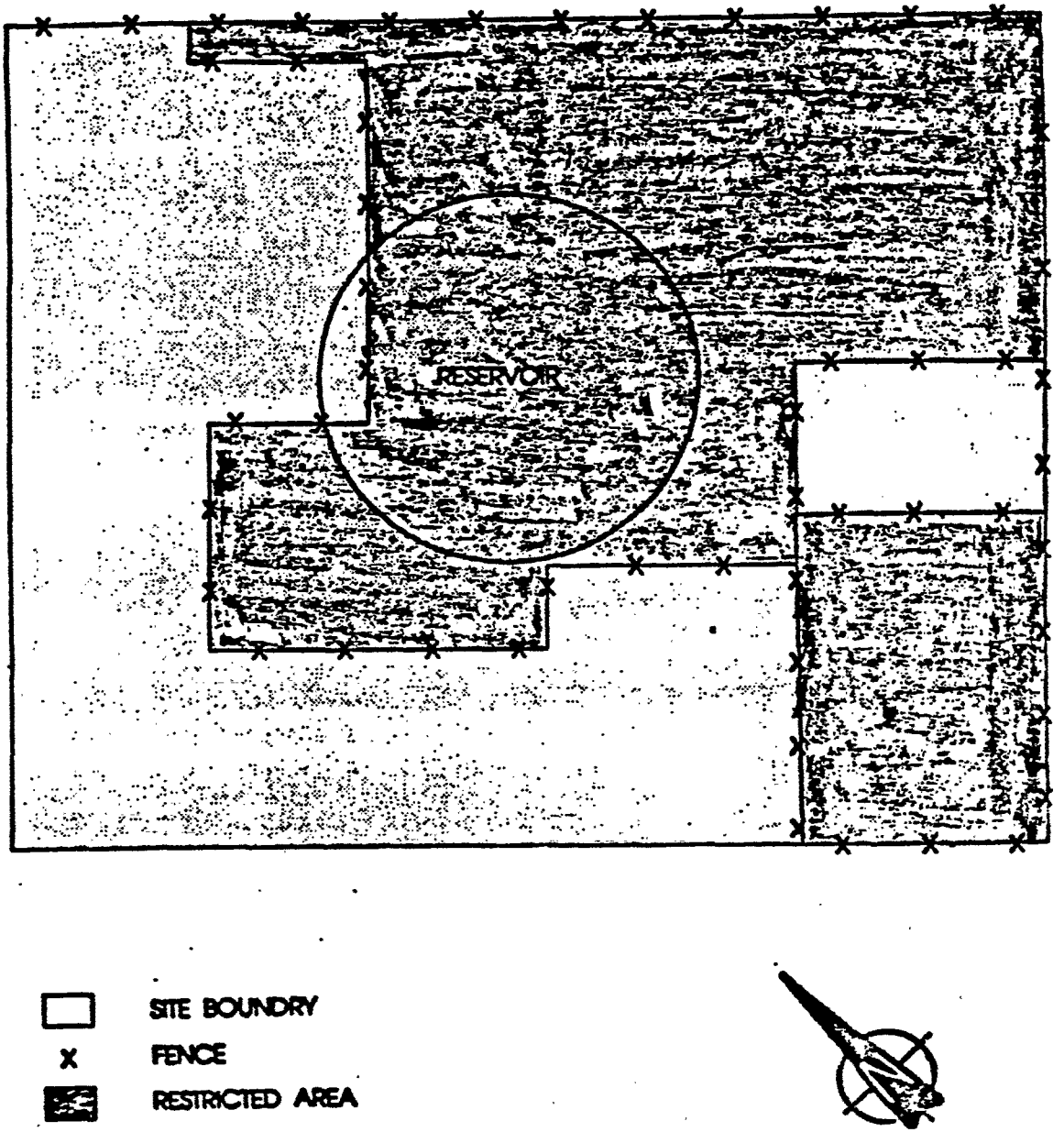


Figure 3 Fencing Diagram

Institutional controls would be implemented to restrict land use. The purpose of these controls would be to prevent exposure to contaminated media, and would include placing a notice on the deed, preventing the use of the groundwater beneath the site, preventing development on parcels within the site boundary that could cause exposure to contamination, and restrictions on the use of the fenced parcels. While the property owners would have some discretion to propose future uses, the institutional controls will ensure that any future use is protective of human health.

Because wastes would remain on-site, annual monitoring along with a series of five-year reviews to evaluate changes in site conditions would be required for this alternative. Annual monitoring would include soil, subsurface gas, and groundwater media. The barrels of waste material currently on the property would be properly disposed off-site.

8.3 *Alternative 3: Containment*

There are four options to this alternative, all of which entail some type of cap over the contaminated areas. Excavation is included for some of the options of this alternative. Excavated materials would be consolidated under the cap. Option A is a multi-layer soil cap, Option B is an asphalt cap, Option C is a RCRA-equivalent asphalt cap, and Option D is an impermeable hazardous waste RCRA cap. The goal of this alternative is to prevent exposure to contamination, so land use decisions would take exposure scenarios into consideration.

Land use restrictions would be implemented to prevent activities that might breach or damage the cap. Restrictions also would be implemented to prevent the use of the groundwater in the shallow aquifer underneath the site, and to restrict use of properties with residual contamination so that potential contact with contamination beneath the properties is prevented.

The containment options might also require a landfill gas venting and treatment system, since the gases would no longer be able to slowly permeate the existing soil cap and release to the atmosphere. With a cap in place, the landfill gases generated might migrate laterally from under the cap and infiltrate surrounding buildings. More testing and sampling would be done to determine the volume and extent of gas generation, but a venting remedy is likely to be necessary. To prevent migration of landfill gases, a combination of passive and active venting would be installed. Passive venting consists of perforated plastic tubing which provides gases a means of transport to the surface for treatment. The active portion of the system consists of a blower which would pull gases to the surface through the vapor wells installed in the reservoir. The treatment would be simple flaring of the gases, with any condensation generated from this process being contained and disposed off-site.

Because the wastes would remain on-site for all options under this alternative, 5-year reviews would be required. The annual monitoring strategy for all the options of this alternative would include cap stability evaluations, in addition to monitoring groundwater and subsurface gas contaminant levels over time.

8.3.1 Option A: Multi-Layered Soil Cover

This option involves the installation of a multi-layered soil cap over all accessible waste handling areas and the reservoir. The lower layer would be a compact clay layer having a low permeability. The upper layer would be topsoil and vegetation. Option A provides erosion and moisture control and controls off-site migration of contaminated dust. The cap would cover approximately 860,000 square feet (approximation based on aerial photographs). This area corresponds to Areas 3, 4, 6, 7, and most of Area 2. (See Figure 4 for the cap area.) The barrels of soil from the remedial investigation (soils from the well drilling) would be consolidated under the cap. The remaining barrels of waste materials would be disposed off-site. The entire site, with the exception of the businesses presently operating, would be fenced and posted.

8.3.2 Option B: Asphalt Cap without Excavation

This option would place a six-inch asphalt cap (four inches of gravel overlain by two inches of asphalt) over any exposed soil areas of the site. This would provide an additional physical barrier between the contaminated soils and the surface population. Like Option A, no excavation of contaminated material would be done on the site. The only earth moving work would be consolidating the barreled investigation derived wastes (IDW) under the cap, and perhaps some addition of soil to even up site grade for installation of the asphalt cap. The asphalt would cover approximately 860,000 ft^2, the same area as Option A.

8.3.3 Option C: RCRA-equivalent Asphalt Cap with Limited Excavationn

The cap material for this option itself is similar to Option B, but this option would cover a smaller area of the site because the limited excavation would consolidate the contaminated material under a smaller space. The intent of the excavation is to remove the contaminated soils found in the sumps and other areas to the background (or a 10^{-6} excess cancer risk) level for the contaminants of concern, and consolidate them under the cap so that some parcels on the property can be free from some of the institutional controls. An additional Flexible Membrane Liner (FML) would also be added underneath the asphalt cap to reduce the possibility of rainwater infiltration. With the membrane liner and gas remedy system, this cap would meet the substantive requirement of the more extensive RCRA cap described as Option 4. The estimated area covered by this option is 750,000 ft^2. Figure 5 presents the area to be capped and the areas to be excavated.

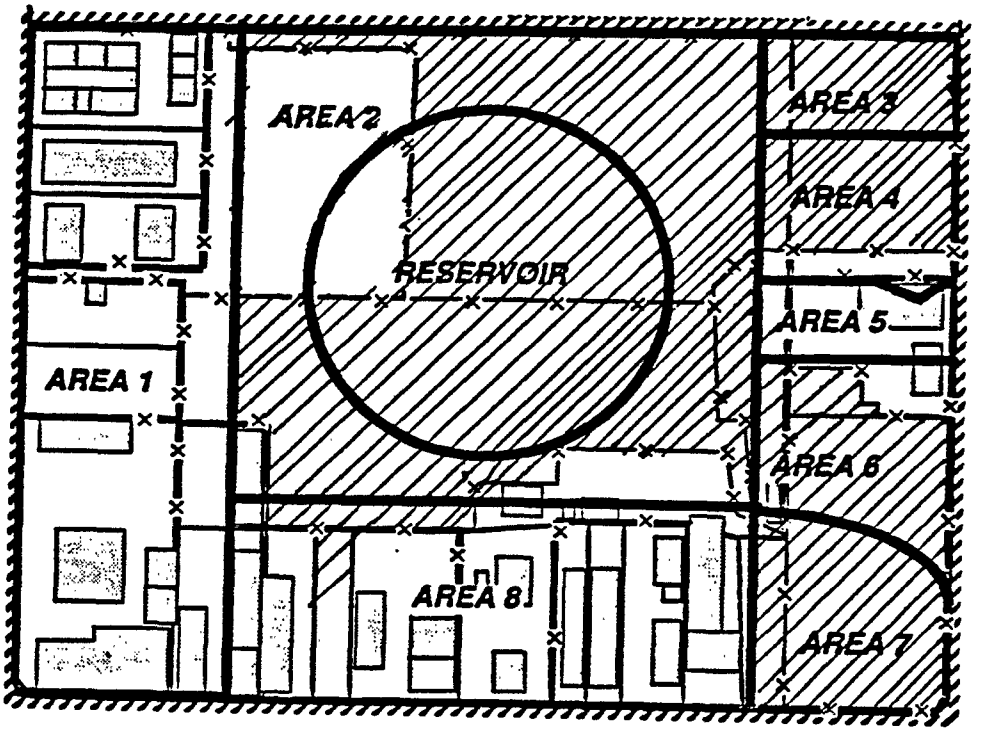


Figure 4 Area to be Capped for Alternatives 3A and 3B

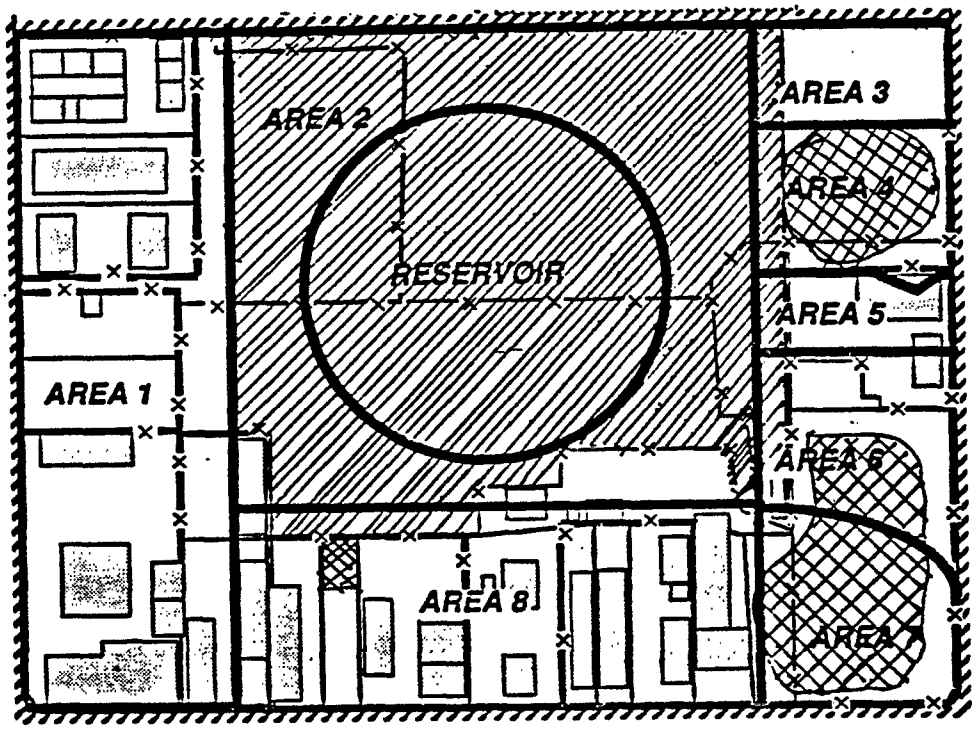


Figure 5 Areas to be Excavated and Capped for Alternatives 3C and 3D

8.3.4 Option D: Multi-Layered Hazardous Waste Final Cover

For Alternative 3, Option D, a multi-layered cap meeting the requirements for surface impoundment/landfill closure, as defined in 40 CFR 264.221 and 264.228, would be installed. The cap would cover approximately 750,000 square feet, the same area as that of Option C, shown in Figure 5. Limited excavation would be done to consolidate contamination not currently contained and protected by asphalt or structures. This alternative would provide erosion and moisture control and prohibit upward vertical migration of contaminants (liquid, solid, gas/vapor) through a series of low permeability layers and synthetic liners. Figure 6 shows a schematic of a full RCRA cap structure.

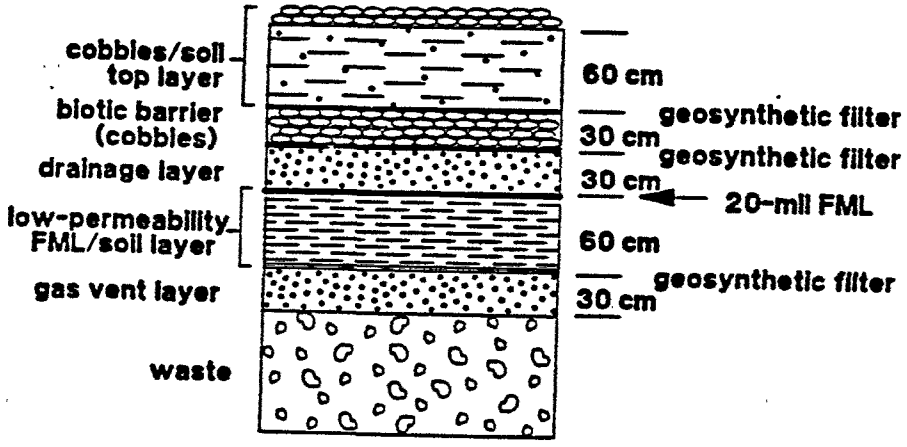


Figure 6 Cross-section Schematic of a Full-RCRA Cap

8.4 *Alternative 4: Excavation and Off-site Disposal*

This alternative would excavate contaminated material and dispose of it at an off-site facility permitted to accept such wastes. In the FS, two options to this alternative were presented: (A) excavation of only the areas described in the Alternative 3 options, with subsequent fencing and institutional controls of the reservoir area, and (B) complete excavation of all contaminated soils at the site,

including the reservoir and Area 2,. The option for complete excavation was discarded due to the very high cost, increased short term risks, and the small increase in long term effectiveness versus the other alternatives.

The alternative presented in the Proposed Plan was Option A, limited excavation (as explained for Alternatives 3C and 3D), off-site disposal, fencing of the remainder of the property, and institutional controls.

9.0 Summary of Comparative Analysis of Alternatives

The NCP sets forth nine criteria to be used for a detailed, comparative analysis of alternatives that have been retained after the screening portion of the Feasibility Study. The nine criteria are as follows:

- Compliance with ARARs
- Overall protection of human health and the environment
- Long-term effectiveness and permanence
- Reduction of toxicity, mobility, or volume through treatment
- Short-term effectiveness
- Implementability
- Cost
- State acceptance
- Community acceptance

A detailed analysis was presented in the Feasibility Study, while a summary was in the Proposed Plan, not including an evaluation of State and Community acceptance. The comment period on the Proposed Plan provided this information, which is included in Table 1. For a more detailed evaluation of the alternatives and the nine criteria, please refer to Chapter 5 of the Feasibility Study of August 2, 1993.

Table 1 Comparison of Alternatives

Criteria	Alt 1 No Action	Alt 2 Fencing, Revegetation, and Institutional Controls	Alt 3A Multi-layer Soil Cap	Alt 3B Asphalt Cap without Excavation	Alt 3C RCRA-equivalent Asphalt Cap with Limited Excavation	Alt 3D Full RCRA Cap with Limited Excavation	Alt 4A Limited Excavation and Off-site Disposal
Overall Protectiveness	No, however risk levels are within, or only slightly above, levels EPA considers acceptable	No, however risk levels are within, or only slightly above, levels EPA considers acceptable	Moderate, depending on maintenance of the cap.	Moderate, depending on maintenance of the cap.	Yes	Yes	Moderate, since surface contamination removed and current risk levels are within, or only slightly above, levels EPA considers acceptable
ARAR Compliance	No, does not meet landfill closure requirements	No, does not meet landfill closure requirements	No, since permeability may not meet landfill closure requirements	No, since permeability may not meet landfill closure requirements	Yes	Yes	No
Long-term Effectiveness	No, since wastes will be left on-site, with no effective control to prevent contact with contamination	No, since wastes will be left on-site, with no effective control to prevent contact with contamination	Yes, so long as cap integrity is maintained to prevent exposure to contamination	Yes, so long as cap integrity is maintained to prevent exposure to contamination	Yes, integrity of cap more easily maintained than 3A, 3B to prevent exposure to contamination	Yes, integrity of cap is more assured because of multiple layers, therefore preventing exposure to contamination	No, since wastes will be left on-site, with no effective control to prevent contact with contamination
Implementability	Yes	Yes	Yes	Yes	Yes	Yes	Moderate. Transporting soil may be difficult.

Table 1 Comparison of Alternatives

Criteria	Alt 1 No Action	Alt 2 Fencing, Revegetation, and Institutional Controls	Alt 3A Multi-layer Soil Cap	Alt 3B Asphalt Cap without Excavation	Alt 3C RCRA-equivalent Asphalt Cap with Limited Excavation	Alt 3D Full RCRA Cap with Limited Excavation	Alt 4A Limited Excavation and Off-site Disposal
Short-term Effectiveness	Yes	Yes	Yes	Yes	Slight increase in short-term risk due to excavation. Precautions would be taken to mitigate risks.	Slight increase in short-term risk due to excavation. Precautions would be taken to mitigate risks.	Slight increase in short-term risk due to excavation. Precautions would be taken to mitigate risks.
Reduction of Toxicity, Mobility or Volume through Treatment	No	No	Though there would be no treatment of contaminated soils, there would be some reduction of mobility due to decrease in rainwater infiltration. Flaring system would reduce volume and mobility of subsurface gases through treatment.	Though there would be no treatment of contaminated soils, there would be some reduction of mobility due to decrease in rainwater infiltration. Flaring system would reduce volume and mobility of subsurface gases through treatment.	Though there would be no treatment of contaminated soils, there would be some reduction of mobility due to decrease in rainwater infiltration. Flaring system would reduce volume and mobility of subsurface gases through treatment.	Though there would be no treatment of contaminated soils, there would be some reduction of mobility due to decrease in rainwater infiltration. Flaring system would reduce volume and mobility of subsurface gases through treatment.	No treatment to reduce TMV, but would reduce on-site volume by excavation and off-site disposal.
Cost	$427,000	$457,000	$2,095,500	$3,259,500	$5,514,700	$12,824,700	$12,937,700

Table 1 Comparison of Alternatives

Criteria	Alt 1 No Action	Alt 2 Fencing, Revegetation, and Institutional Controls	Alt 3A Multi-layer Soil Cap	Alt 3B Asphalt Cap without Excavation	Alt 3C RCRA-equivalent Asphalt Cap with Limited Excavation	Alt 3D Full RCRA Cap with Limited Excavation	Alt 4A Limited Excavation and Off-site Disposal
State Acceptance	The State indicated that it would not support a decision of No Action.	The State has indicated that it would not support a decision where no physical measures were taken to reduce risks.	The State has expressed its support for permanent containment remedy, but would require more than only a soil cap.	The State has express its support for a permanent containment remedy, and an asphalt cover would meet most of their requirements.	The State has expressed its support for this option.	The State has expressed its support for this option.	The State has expressed its support for a permanent containment option, and since this alternative would leave a great deal of contaminated material in place, would not be supported.
Community Acceptance	The community has expressed no interest in a no-action remedy selection.	The community has expressed its interest in having the contamination removed, and would not support only administrative approaches.	The community generally supported this option, since it would be aesthetically pleasing. Had reservations with all containment options concerning protectiveness, since contamination remains.	The community was somewhat supportive of this option, but had concerns with final appearance and overall protectiveness and long term safety of any containment option.	The community was somewhat supportive of this option, but had concerns with final appearance, protectiveness, effectiveness, and long term safety of any containment option.	The community was somewhat supportive of this option, but had concerns with protectiveness, effectiveness, and long term safety of any containment option, as well as the finished height of this option.	The community was not supportive of this option. They would like all the contaminated soil removed, not just a portion, with the remainder of the site fenced.

10.0 The Selected Remedy

Based upon consideration of the requirements of CERCLA, the detailed analysis of the alternatives using the nine criteria, and public comments, EPA has determined that a hybrid of Alternatives 3A and 3C is the most appropriate alternative for the WDI Superfund Site. The goal of the remedy is to provide a permanent barrier to the contaminated soil, prevent rainwater from infiltrating the contaminated soils and carrying the contamination into the groundwater, prevent gases from migrating off the property, and maximize the beneficial end use of the site to the extent practicable.

The selected remedy is protective, meets ARARs, and is effective for the long-term and is permanent. While it does not meet the statutory preference for treatment of the principle threat, landfill gases may be treated if necessary. The selected remedy is constructable with readily available materials and common construction techniques, so is considered implementable. Short-term risks will be slightly elevated during construction, but measures will be taken to minimize the impacts. Since the cap will be impermeable, groundwater will be protected, thus further reducing the risks posed by the site.

This remedy is considered cost effective, and has been accepted by the State of California. During the design process, the community will have the opportunity to participate in determining the ultimate configuration of the remedy, so that community acceptance, as much as possible, will be achieved.

Concerns of both the citizens and the City Council of the City of Santa Fe Springs, were that EPA's Proposed Plan (Alternative 3C was the preferred alternative) would result in an unattractive mound of black asphalt that would be useless to all concerned, as well as an eyesore to the residents of Santa Fe Springs and the students of St. Paul High School. As a result, the decision for the final configuration of the cap will be made during the design phase of the project with input and involvement from the community. This involvement provides for public meetings describing the design as it develops through the design process, and input into the decision-making processes in determining the configuration and final design of the cap. The cap will be required to meet an impermeable standard of 10^{-7} cm/sec. Materials that will be used to achieve this performance standard will be evaluated during the design phase.

With the selected remedy, the site will be capped with an impermeable, RCRA-equivalent cap, with the surface configuration to be determined during design. For cost estimating purposes, EPA estimates that a liner will cover the capped area, with approximately 75% of the cap surface asphalt, and the remainder of the cap area a soil and vegetation cover. This configuration of the remedy will be protective and provide for a more attractive solution to the site problems.

The following are the key components of the selected remedy:

- Excavating designated areas to clean-up standards (see Table 2)
- Consolidating excavated materials within Area 2
- Placing perforated piping for the passive gas extraction system throughout area to be capped (Figure 5)
- Constructing RCRA-equivalent, impermeable cap over the reservoir and designated areas (see Figure 7 for estimated final configuration).
- Monitoring gases that emanate from the site, and installation of an extraction and treatment system if constituents and volume of gases require it
- Implementing institutional controls so that future use of the site is compatible with the remedial goals and the integrity of the cap is maintained, parcels that have residual contamination are restricted from activities that could lead to exposure to contaminated soils, and shallow groundwater use is prohibited

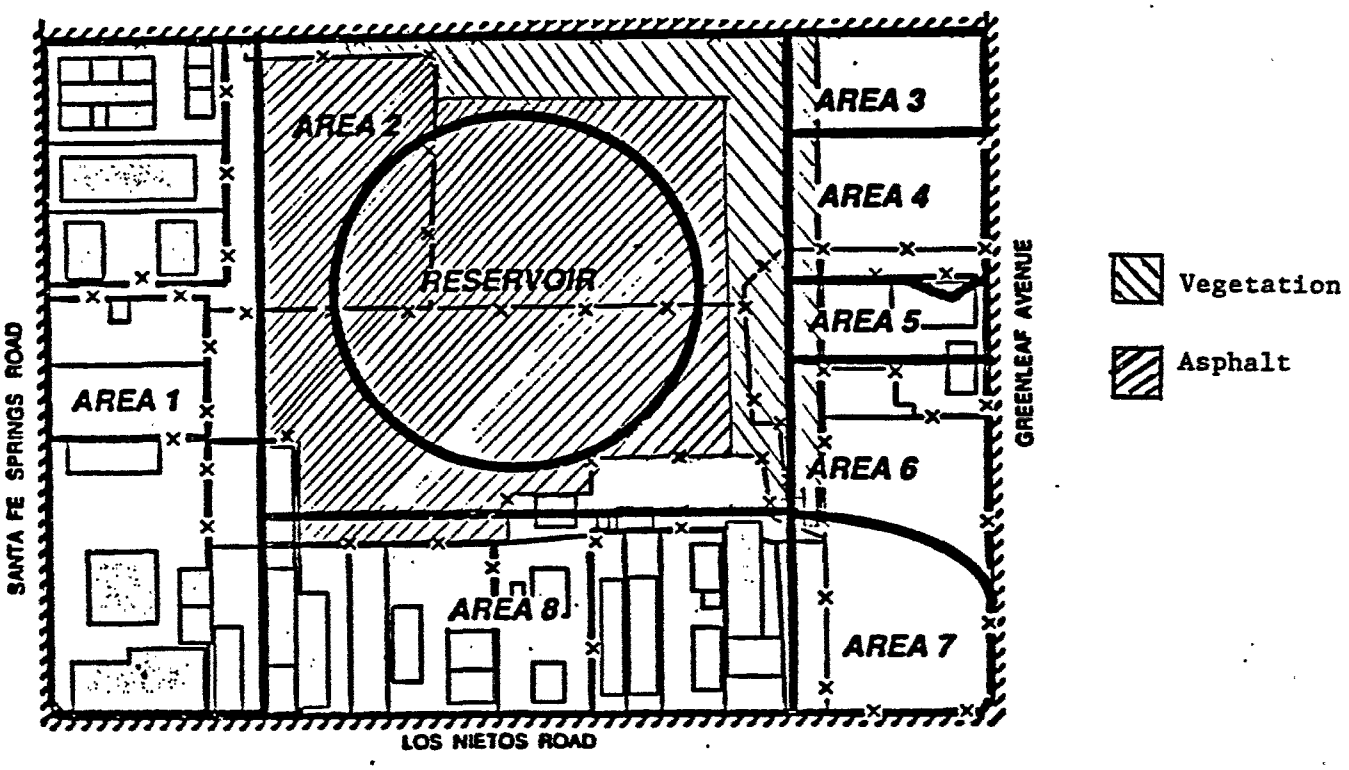


Figure 7 Approximate Configuration of Selected Remedy Cap

10.1 *Clean-up Standards*

The purpose of the excavation of the selected remedy is to remove the sump material from the undeveloped areas and consolidate the contaminated material. Since no ARARs were identified for clean-up standards for soils, the standards for the excavation are based upon either background, or health based levels (preliminary remediation goals, or PRGs, were used, and are explained in the Feasibility Study) for the contaminants without detectable background levels. The clean-up standards have been established so that the contaminated soils and sump materials are removed, while soils at or near background levels are left in place. Table 2 presents the contaminants of concern, the health based PRG (based on residential exposure), the background level, if any, and the clean-up standard.

Table 2
PRGs, Background Levels, and Clean-up Standards for Contaminants of Concern in Soils at WDI

CHEMICAL	PRG (mg/kg)	BACKGROUND (mg/kg)	CLEAN-UP STANDARDS (mg/kg)
Arsenic	0.97	2.31 (6.5 USGS)	10.0
Beryllium	0.41	0.278	0.41
Chromium	44	12.10	44
Cadmium	39	0.363	39
Lead	500	7.00	500
Thallium	5.5	12.00	12.0
Benzene	2.7	---	2.7
Dieldrin	0.11	---	0.11
DDT, DDE, DDE	5	---	5
cPAHs	0.23	---	0.23
PCBs	0.22	---	0.22

The clean-up standard for arsenic higher than background was selected. This decision was based on several factors. First, background levels in soils pose an excess cancer risk to residents ranging from approximately 2.5×10^{-6}, based on samples from St. Paul High Schhol, to almost 7×10^{-6}, based on USGS background levels for the general area. Secondly, the areas to be excavated are currently zoned for light industrial use, and any proposed development would be limited to industrial use only. The PRG for industrial soil exposure is 3.3 mg/kg, so the clean-up standard of 10.0 mg/kg, which is three times the PRG, would yield a risk of approximately 3×10^{-6} for industrial use. This approximates the current risk posed to residents in the area from the natural, background soils. Lastly, the institutional controls that will be placed on the properties will ensure that none of the properties are used for residential purposes.

10.2 *Limited Excavation and Consolidation*

The areas to be excavated are identified in Figure 5. These areas were chosen because of the levels of contamination found at and beneath the surface, the accessibility of the selected areas since they are vacant, and remediation will maximize economic redevelopment opportunities. No businesses or buildings would be disrupted by this excavation. Other areas of the site where contamination was discovered are covered either with buildings, pavement, or both. These structures prevent direct contact with any existing contamination beneath the soil, and therefore meet the main goal of this remedy, which is to prevent direct contact with the contaminated soils.

The excavated material will be moved to the Area 2 portion of the site, where the cap will be placed. The existing clean surface fill will be pushed back so that the excavated material can be covered over by clean fill prior to the placing of the first layer of the cap. The final grade of the site will be made such that drainage and run-off is uniform and directed to the storm drains, and that there will be no collection of standing water on the cap. The excavated portions will be refilled with clean fill, compacted, and graded.

Dust suppression will be employed during the excavation, so that the potential for contaminant migration during excavation is greatly reduced. Suppression techniques include water or polymer spraying on the surface, wind breaks, and other methods for reducing the amount of migrating dust. Air monitoring will also be required during the excavation to ensure that any subsurface gases encountered during the excavation are dealt with properly, and that the activities at the site are not adversely impacting local air quality.

10.3 *Passive Venting System*

Since methane, the major component of subsurface gases detected at the site, is lighter than air, it tends to move upward through the soil until it arrives at the surface, where it is released into the atmosphere. If buildings occupy the space above the area where methane is generated, the gas could collect and pose a fire or explosion hazard. The gas could also migrate laterally if there is not an outlet in the vertical direction. For this reason, perforated piping will be placed on the surface of the site, prior to the placement of the cap. The piping will direct the rising gases to the surface atmosphere, where they can be vented or treated if necessary. If an active gas extraction system is necessary (the volume of subsurface gases is high, or its components require extraction), the passive system will be piped to the active extraction system and all the gas will be treated in one flaring system (if volume is sufficient to burn). If the risks posed by the gases cannot be mitigated by flaring, an alternate treatment such as carbon adsorption will be evaluated and implemented. Section 10.5 discusses the active gas extraction and treatment component of the remedy.

10.4 *RCRA-equivalent Impermeable Cap*

The actual cap will be constructed as a multi-layer, impermeable cap that meets the substantive requirements of RCRA. Its components will be determined during the design phase, but its final configuration will have a permeability of 10^{-7} cm/sec, which will provide protection of groundwater as well as maintain the performance of the cap over the long-term. For cost analysis purposes, it was assumed that the preferred alternative in the Proposed Plan, Alternative 3C, would comprise the major portion of the cap, with approximately 563,000 ft^2 of the site capped with a flexible membrane, gravel, and asphalt. The remaining 190,000 ft^2 will be covered with a multi-layered vegetation cap.

10.5 *Gas Monitoring, and Active Gas Extraction and Treatment*

Prior to any excavation or construction, the vapor wells will be sampled to estimate the volume of gases beneath the site and determine the proper gas treatment components. A flux chamber may be used to estimate the volume and make-up of gases permeating the existing soil cover of the site, since the cap will prevent the permeation of gases to the atmosphere that is presumably occurring. Once these data are collected, an analysis will be performed to determine if an active gas extraction system is necessary. If the volume of gases rising to the surface warrant treatment, an active system must be put in place so that the gases may be treated by flaring. If there are chlorinated components to the extracted gases, a wet scrubber may be necessary for the flare.

The active system would utilize existing vapor wells as extraction wells. The gases would be pulled from the wells by a blower, and directed to a flare, where they will be destroyed. If the volume of methane is not high enough to allow burning, then another treatment, such as carbon adsorption, will be used.

10.6 *Institutional Controls*

Institutional controls are legal restrictions placed on a property to restrict types of use. In general, institutional controls are either (1) government controls imposed by state or local governments; or (2) proprietary controls, such as deed restrictions, whereby a party holding an interest in a parcel of property restricts the use of that property. The purpose of institutional controls is to prevent use of the site that could facilitate contact with contaminated soils. The restriction on use of the property will depend on the level of contamination that exists on the parcel, and the risks posed by that contamination. The institutional controls may vary from a simple notice on the deed stating that contamination exists on the property (if the contamination is deep and low-level), to restrictions on digging or excavation that could expose the contaminated soil. Restrictions will also be made for the use of groundwater beneath the site.

There will also be restrictions on the compatible uses of the capped areas of the site. Since the purpose of these restrictions is to maintain the integrity of the cap, only those uses that will not adversely affect the cap will be allowed. Some of the compatible uses include recreation (e.g., tennis and basketball courts, miniature golf), and light storage. Uses that are not compatible include heavy equipment storage, enclosed buildings, and any structure that would need to break the integrity of the asphalt in order to be built. While EPA recognizes that there may be isolated cases where the cap may be breached and suitably repaired, EPA will discourage all but the most substantive justifications for tampering with the remedy and the integrity of the cap.

Restrictions placed on the properties with residual contamination will be determined during negotiations with each property owner. In general, if there is contamination beneath a property that can pose a health risk, there will be a restriction placed on the property. At the very least, the restriction in the deed will state that contaminated material exists beneath the site. The deed restriction will be utilized when contamination is at least 15 feet deep, and the likelihood for direct contact, even with construction activities, is minimal.

For contamination that lies within the first 15 feet, a determination will be made as to whether the contamination poses a health threat. For arsenic, for example, levels less than 10.0 mg/kg will not require any additional restriction other than a notice. For arsenic levels greater than 10.0 mg/kg, restrictions will require that suitable mitigation measures be implemented to protect workers and surrounding

residents from the risks posed by the contamination and the potential exposure. These measures would include sampling prior to any work being performed, worker protection and dust suppression during any construction, and remediation if necessary. A similar determination will be made for other contaminants found on the properties The final development of the institutional controls will be made during negotiations in the design phase.

Vegetation planted on the soil and clay cap must be low-maintenance and drought tolerant. Also, the root systems of the selected plants will be fairly shallow, so that the roots do not penetrate the clay layer. The plants will also be chosen to maximize erosion protection along the slopes. At a minimum, the vegetation should be sustainable for the climate of Santa Fe Springs without irrigation (after initial planting) and require little maintenance. Once the vegetation begins growing, only minimal work will be required for upkeep and maintenance.

10.7 *Annual Inspection*

All components of the remedy will be inspected and evaluated not less than annually . Special circumstances (such as earthquakes or heavy rains) may require additional inspections. Monitoring will be conducted as required by ARARs, and include groundwater sampling, vapor well sampling, and flare performance and emissions (if there is a flare). The site will also be inspected to ensure that the cap integrity is maintained, and that institutional controls are in effect. Operation and maintenance will be conducted to ensure that the remedy maintains its effectiveness.

10.8 *Cost*

A detailed cost description of each of the components of the remedy is included in the FS. The estimated cost for the selected remedy is shown in Table 3 as a present worth value, and includes annual monitoring for 30 years and appropriate 5-year reviews.

10.9 *Design Options*

During the Public Comment period, several suggestions were made to enhance the selected remedy. These included a block retaining wall between the site and the St. Paul High School athletic fields, and a gas trench near the border of the site to prevent gas migration onto those fields. These suggestions will be taken into account during the design, since they may be somewhat mutually exclusive given current site conditions (especially the trees along the border). The trench may also be incompatible with the gas extraction system.

Table 3 Selected Remedy Costs	
Component	**Present Worth Cost**
Monitoring • Subsurface gas samples - $3600/yr • Groundwater samples - $4235/yr • Annual reporting - $5000/yr • Five Year Reviews - $10,000 each	$252,000
Excavation of Contaminated soil • 78,000 yd^3 @ $10/$yd^3$	$780,000
Replacement Fill • 52,000 yd^3 @ $0.10/$yd^3$	$5,200
Flexible Membrane Liner • 750,000 ft^2 @ $2.40/$ft^2$	$1,800,000
Clay layer (1 foot thick, 10^{-7} permeability) • 7000 yd^3 @ $13/$yd^3$	$91,000
Top Soil (1 foot thick) • 7000 yd^3 @ $14.50/$yd^3$	$101,500
Vegetation (hydroseeding) • 21,000 yd^2 @ $1.25/$yd^2$	$26,250
Asphalt Paving • 562,500 ft^2 @ $3.00/$ft^2$	$1,687,500
Gas Collection and Treatment System	$427,500
Total	**$5,170,950**

11.0 Statutory Determinations

EPA must select remedies that are protective of human health and the environment, comply with applicable or relevant and appropriate requirements (unless a statutory waiver is justified), are cost-effective, and utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. In addition, CERCLA includes a preference for remedies that employ treatment that permanently and significantly reduce the toxicity, mobility, or volume of hazardous wastes as their principal element. The following sections discuss how the selected remedy meets these statutory requirements.

11.1 *Protection of Human Health and the Environment*

The selected remedy protects human health and the environment through the reduction of direct contact with contaminated soil by constructing a multi-layered cap. The cap will also reduce the potential for rainwater to leach contaminants from the soil into the groundwater. The gas venting component of the remedy will reduce the potential for migration of subsurface gases laterally from the site, and will treat the gases, if necessary, to reduce the impact to local air quality.

Institutional controls will be implemented so that permanent restrictions will be in place to notify future land owners of the extent and risks of residual contamination. The restrictions placed on the parcels will prevent inadvertent contact with contaminated soil for the parcels where no excavation or capping will take place. For the capped area, the institutional controls will maintain the integrity of the cap so that contaminated material is effectively contained.

There are some short-term risks associated with this remedy while excavation and consolidation of the contaminated soils are performed. However, dust suppression measures will be taken to minimize this risk.

11.2 *Compliance with Applicable or Relevant and Appropriate Requirements*

The specific regulations that are applicable or relevant and appropriate for the WDI site are listed below. All of these regulations are action-specific ARARs. For a description of the regulations, see Table 2-3 of the Feasibility Study. This list constitutes EPA's determination of the ARARS for the activities outlined as the selected remedy. The ARARs identified for WDI for the selected remedy are:

Hazardous Waste Control Act (HWCA) (State equivalent of RCRA) that are Relevant and Appropriate:

- Monitoring for Interim Status Facilities, 22 CCR § 66265.97 (a) - (d)
- Landfill Closure and Post-closure Care, 22 CCR § 66265.310 (a), (c)
- Seismic Design Standards, 22 CCR § 66265.25 (b)

California Integrated Waste Management Board Regulations that are Relevant and Appropriate:

- Gas Monitoring and Control During Closure and Post-closure, 14 CCR Chapter 3, § 17783-17783.15
- Post Closure Land Use, 14 CCR § 17796

- South Coast Air Quality Management District (SCAQMD) Regulations that are Applicable:
  - Regulation IV
    - Rule 401 - Visible Emissions
    - Rule 402 - Nuisance
    - Rule 403 - Fugitive Dust
    - Rule 404 - Particulate Matter (Concentration)
    - Rule 405 - Solid Particulate Matter
    - Rule 407 - Liquid and Gaseous Air Contaminants
    - Rule 408 - Circumvention
    - Rule 409 - Combustion
    - Rule 473 - Disposal of Solid and Liquid Wastes
  - Regulation XI
    - Rule 1150.2 - Control of gaseous emissions from inactive landfills

- South Coast Air Quality Management District (SCAQMD) Regulations that are Relevant and Appropriate:
  - Regulation IX - Standards of Performance of New Stationary Sources
  - Regulation X - National Emission Standards for Hazardous Air Pollutants
  - Regulation XI -
    - Rule 1108.1 - Emulsified Asphalt
    - Rule 1150 - Excavation of Landfill Site

In addition, the guidance document, EPA/530-SW-89-047, July 1989, "Final Covers on Hazardous Waste Landfills and Surface Impoundments" will be used in implementing the selected remedy.

11.3 *Cost Effectiveness*

EPA believes this remedy will significantly reduce the risks at this site by eliminating the pathway for direct contact with contaminated soil. This remedy will also reduce the potential for rainwater leaching contaminants from the soil into the groundwater by the construction and maintenance of the impermeable cap. This will be done at an estimated cost of approximately $5,170,000, which EPA considers reasonable for the risk reduction that will be achieved.

11.4 *Use of Permanent Solutions and Alternative Treatment Technologies to the Maximum Extent Practicable*

The selected remedy utilizes permanent solutions and alternative treatment technologies (or resource recovery) to the maximum extent practicable. However, the treatment of the principal threats of the site was evaluated in the FS and

screened out because it was not found to be practicable. The remedy consists of proven technologies, common construction materials and practices, and incorporates EPA guidance for closing permitted landfills to provide a protective, permanent solution to the site problems.

11.5 *Preference for Treatment as a Principal Element*

It was determined that treatment of the principal threats of the site was not practicable for this site. The main contaminant posing site risks, arsenic, is not readily treatable in the soil. However, treatment is a contingency of the subsurface gas component of the remedy. EPA believes that the selected remedy, though not implementing treatment as part of its principal element, is protective for the long-term and currently implementable.

12.0 Documentation of Significant Changes

The Proposed Plan for the Waste Disposal, Inc. Superfund Site was released for public comment in August 1993. An Asphalt Cap with Flexible Membrane Liner was the main component of the remedy, with limited excavation and consolidation of some contaminated soils under the proposed cap. EPA has reviewed all written and verbal comments submitted during the public comment period, and has made its decision with only minor changes to the remedy.

Instead of a full asphalt cover over the capped area of the site, the cap with consist of a multi-layered, RCRA-equivalent cap with a performance standard permeability of 10-7 cm/sec. The components and final configuration of the cap will be determined during the design phase, with additional community involvement in making those final determinations. The decision was made to allow for greater public participation during the design phase in response to public comments and City concerns for the aesthetics of the finished remedy. This has a small effect on cost, and impacts long-term effectiveness slightly, since some of the cap surface may be vegetation which might be easier to breach than asphalt. However, since the cap will be essentially impermeable, the selected remedy will still be protective of human health and the environment.

Additional design options were added as a result of comments received during the comment period. A block retaining wall between the site and St. Paul High School will be considered in order to provide more security for the site, as well as block the view of the site from the school. A gravel trench for gas migration prevention will also be considered. However, current site conditions must be carefully evaluated and adequate involvement from the High School, because in order to implement both design options, the trees currently growing between the site and the High School may have to be removed.

PART III RESPONSIVENESS SUMMARY

1.0 Introduction

This Responsiveness Summary provides EPA's response to comments received on the Proposed Plan for Contaminated Soil and Subsurface Gas at WDI. The Proposed Plan was made available for public review and comment on August 12, 1993. During a public meeting on September 1, 1993 EPA presented the alternatives for addressing the soil and subsurface gas contamination, described EPA's preferred alternative, answered questions, and received public comments on the Proposed Plan. EPA also made a presentation to the Santa Fe Springs City Council on August 26, 1993, and to the parents of St. Paul High School students on September 9, 1993.

The public comment period ended on October 31, 1993. In addition to the comments received during the public meeting, EPA received the following comment letters:

- Ernest Brown & Company, *Public Comment on Preferred Alternative Waste Disposal, Inc. Superfund Site*, September 9, 1993
- Department of Toxic Substances Control, *Waste Disposal, Inc. Feasibility Study Report for Soils and Subsurface Gas*, September 9, 1993
- Water Replenishment District of Southern California, *Proposed Plan for Contaminated Soil and Subsurface Gas for Waste Disposal, Inc., Santa Fe Springs, California*, September 10, 1993
- Department of Toxic Substances Control, *Comments to Waste Disposal, Inc. Proposed Plan,* September 10, 1993
- Bear, Kotob, Ruby & Gross, *Waste Disposal Inc. in Santa Fe Springs - Superfund Site,* on behalf of Dr. Adeline Bennett, September 15, 1993
- Department of Health Services comments of the Proposed Plan, September 21, 1993
- City of Santa Fe Springs, *City of Santa Fe Springs' Comments on EPA Proposed Remediation Plan for Waste Disposal, Inc. Superfund Site,* October 8, 1993

- Albert L. Sharp, City of Santa Fe Springs Mayor Pro Tem, *Proposed Soils Remedy for the Waste Disposal, Inc. Superfund Site - Santa Fe Springs, California,* October 8, 1993

- Phil Campbell, letter of support for EPA's preferred alternative, October 29, 1993

Copies of these letters, as well as additional correspondence that relates to the comment letters EPA received during the comment period, are attached to this document as Attachment A.

The remainder of this responsiveness summary is divided into three sections. Section 2 is a summary of major issues and concerns raised by the comments and EPA's response to these concerns. Section 3 includes each written comment received and EPA's detailed response to each comment. Section 4 includes the comments received during the Public Meeting and EPA's response to them.

2.0 Summary of Responses to Major Issues and Concerns

There were several issues and comments that were brought to EPA's attention during the public comment period. Some of these were raised formally during the Public Meeting, but many were also expressed during the meeting with the parents of St. Paul High School, as well as EPA's presentation to the Santa Fe Springs City Council. As a result, EPA has committed to increased community involvement during the design process, and will solicit more comments from the community as the project progresses. The following are concerns related to the decision for the remedy.

2.1 *Health Concerns and Site Risks*

One of the main concerns is that of a potential health threat, both to the citizens of Santa Fe Springs and the students of St. Paul High School. As explained in the Feasibility Study and during the Public Meeting, EPA considers the site a *potential* health threat, based on assumptions made for future use of the site. The site does not currently pose a risk to nearby residents, students, or workers, since there is no activity that would expose persons to the contamination. However, if the site is opened up for development, one of the first things that would happen would be digging for foundations of buildings, in which case contaminated soil would become exposed to the atmosphere, greatly increasing the chances for human exposure. There also exists some surface contamination that trespassers could become exposed to, if they chose to cross the currently fenced site.

In order to protect the health of the community, the pathway through which the population can be exposed must be eliminated. EPA has chosen to place a

physical barrier between the community and the contaminated soils, which pose the highest risk at the WDI site. In order to keep the physical barrier protective, EPA will also implement restrictions on use of the physical barrier, or cap, so that it protects people from exposure to the contaminated soils beneath. These restrictions will be placed on any property within the site boundary where contamination exists above a health concern.

Conversely, some members of the community feel that since the site poses no current threat, nothing should be done at the site. EPA, however, feels that it is necessary to act prior to any exposure occurring. The no-action approach fails to take into account the potential threat of contaminants travelling to the groundwater. Since rainwater can leach contaminants out of the soil and into the groundwater, rainwater must be prevented from entering the soil. This is the other main goal for the cap. Leaving the site in its current condition would provide no protection.

2.2 *Aesthetics and Future Land Use*

Much of the interest and concern for this site concerns ultimate use of the site, and what it will look like to passers-by, students, and nearby residents. EPA has taken these concerns into account by committing to a design process that will allow for greater public involvement.

In the Proposed Plan, EPA's preferred alternative called for a multi-layered cap with an asphalt top layer over the reservoir area. However, this would not have been simply a mounded hill of black asphalt; the cap would have been designed to allow for uniform drainage, and would have changed the current topography very little. In this Record of Decision, EPA has modified the alternative somewhat by requiring a multi-layered, impermeable cap, with the final configuration determined during the design phase. Again, this will allow for greater public involvement during the design of the remedy.

The future use of the site has not yet been decided. It is hoped that EPA, the City of Santa Fe Springs, and the property owners can come to a mutually agreeable decision regarding future use of the capped property. Community input will also be solicited during the discussions of final use. EPA insists that any activity protect the integrity of the cap, and that the activity be included in the design of the final remedy. Once the cap is in place, it should not be breached. EPA recognizes that there may be cases where the cap may be breached and suitably repaired, however, EPA will discourage all but the most substantive justifications for tampering with the remedy. Any foundations or poles that need to be installed for planned future activities should be installed at the time of cap construction, so that the cap retains its protectiveness.

2.3 *Effectiveness of Remedy*

The other major concern of the community was the effectiveness of the remedy, or how to ensure that the remedy is protective, especially for the students of St. Paul High School. EPA is confident that the remedy will be protective, since the remedy design will follow EPA guidance established and proven by previous efforts with landfill sites. Also, with future monitoring and evaluations, EPA will ensure that the chosen remedy remains protective and effective. If the analysis of the data shows that the remedy is not performing according to expectations, and that contaminant levels are increasing or spreading, the remedy decision will be re-evaluated.

3.0 Detailed Response to Comments

3.1 *Comments from Ernest Brown & Company*

A. RCRA-Equivalent Cap

1. Depth of Liner: While the EPA has expressed a desire to facilitate the reuse of the property where the proposed cap is to be placed, the present cap configuration prevents viable economic use of that property. Provisions should be made to place the impermeable liner and the consolidated excavated soil at a greater depth with relation to the asphalt surface. Since the consolidated excavated (i.e., contaminated) materials lie directly under asphalt and thin membrane, there is virtually no ability to place the type of minimal subsurface foundations necessary for likely use. For instance, any RV parking or other storage uses would require a series of fence posts and lamp posts which require shallow subsurface foundations.

Response: Since the purpose of the institutional controls for the cap area is to maintain the integrity of the cap, even if the liner and contaminated soils were below placed at a greater depth with relation to the asphalt surface, there would still not be any allowable activity that would breach the cap. Since the cap is multi-layered, each component must be considered part of the whole and integral to the protection offered. One component cannot be breached and still have cap integrity maintained. As discussed in the institutional controls section of the ROD, future use plans need to be addressed during design, so that any needed foundations or post holes can be incorporated into the design and constructed during the implementation of the remedy.

2. Composition of liner: In-depth consideration should be given to substituting a one foot clay liner in lieu of the proposed flexible membrane liner now being proposed. Such a clay liner may be more durable and may

serve as an equal or superior barrier to infiltration of rainwater. The cost of a clay may also be more economical to construct. If a synthetic membrane is truly deemed the best alternative, testing and/or statistical results should be included in the ROD showing durability and longevity data on the proposed synthetic liner.

Response: EPA has considered the comment, and has decided on a performance-based standard for this remedy, rather than calling out specific materials in this Record of Decision. The Proposed Plan called for a RCRA-equivalent, impermeable, multi-layered cap (membrane liner, gravel and asphalt). This ROD requires a permeability of 10^{-7} cm/sec for the final cap configuration, with a combination of surface configurations based upon community input. That said, the replacement of a membrane liner with a clay layer is not likely, based upon the poor performance of clay layers in dry climates like Santa Fe Springs. Cracking caused by drying of the clay (desiccation) can be irreversible, opening a pathway to the contamination and nullifying the protection of the cap. During design, the final low-permeability layer/top layer configuration will be determined, with additional public input into the decision.

B. Contaminated Soils:

1. Characterization: If the Preferred Alternative is implemented, there should be a more complete characterization of the contaminated soils to be excavated from the former waste handling areas (e.g. areas 3, 4, 6, 7, and Toxo Spray Dust area). Upon review of the Final Remedial Investigation Report (1989), there appears to be an insufficient number of borings placed in these areas (only two borings in some areas) and insufficient laboratory analyses performed. In particular, there appears to be too little data (e.g., only 3-4 analyses in some areas) regarding the lateral and vertical extent of volatile organics, semi-volatile organics, pesticides, PCBs, and metals.

Response: The determination of the extent of excavation will be made based on on-site sampling to ensure that the excavation meets the clean-up standard established in this ROD. EPA feels that based on the RI data, as well as previous studies that outlined the extent of the sumps, the contamination in the designated areas will be removed to the levels established in this document.

2. Movement Across Property Boundaries: The Preferred Alternative contemplates moving contaminated soils onto the center property partly owned by the Pitts Grandchildren's Trust prior to capping. In the absence of express authorization from the Trust, this action, regardless of how logical in the macro sense or how well-intended, constitutes a trespass. The Trust

would like confirmation by the EPA that it must obtain the permission of the Trust, or take the property and pay just compensation under the 5th Amendment, prior to implementing the Preferred Alternative.

Response: EPA does not concur with the Trust's assertions. As a preliminary matter, EPA notes that the issue only arises with respect to soils that are being moved onto the Trust's property from property not owned by the Trust. Some of the contaminated soil that is being consolidated will be moved from areas that are already partially owned by the Trust. Furthermore, for several reasons, EPA does not believe that the movement of the contaminated soils from the areas not owned by the Trust would constitute a trespass or a taking.

First, EPA has broad regulatory authority under Section 104(a) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. §9604(a), to perform such remedial action as it believes is necessary to protect human health and the environment as long as the remedial action is consistent with the National Contingency Plan. The selected remedial action at the WDI Site is a proper exercise of EPA's regulatory power to abate a public nuisance and is not a trespass or a taking. Second, EPA notes that the center property partly owned by the Trust already contains contaminated soils and, in fact, is the most contaminated portion of the entire Superfund Site. Unless a Superfund remedial action is performed, the land owned by the Trust cannot be used for any purpose and has no real market value. Thus the remedial action would not cause any diminution in the value of the property or any injury or damage to the Trust. Finally, EPA observes that the Trust, as the current owner of contaminated property at the Site, is a potentially responsible party (PRP) pursuant to Section 107(a)(1) of CERCLA, 42 U.S.C. §9607(a)(1), and is thereby jointly and severally liable for the costs of the response action. Accordingly, if the contaminated soils from the perimeter areas were transported to a disposal facility off-site, rather than being consolidated in the center property, the total cost of the response action would be significantly higher and the Trust, as a PRP, would be liable for that higher total cost.

Whether a particular action constitutes a trespass or a taking is, of course, ultimately a judicial determination. If this issue were to be litigated, EPA reserves all of its rights to present the above legal arguments and any other legal arguments that might be pertinent. However, since the Trust is a potentially responsible party, EPA will be attempting to have further discussions with the Trust in an effort to negotiate a settlement resolving the Trust's liability under CERCLA Section 122, 42 U.S.C. §9622.

C. Vegetation/Greenbelt Option

As part owners of the area which is proposed to be capped under the Preferred Alternative, the Pitts Grandchildren's Trust strenuously objects to any vegetation or greenbelt option which would make business ventures on the central property impossible. The EPA should continue its prior commitment to work hard in order to implement a remedy which allows for the maximum economic use of the property. A vegetation/greenbelt option would constitute a Taking under the 5th Amendment for which just compensation (i.e., lost profits on a yearly basis indefinitely) must be paid.

Response: The community, the property owners, and the City have expressed various concerns about the future use of the property. Some of the concerns emphasize future economic use, others emphasize safety, and still others focus on aesthetics. In the selected remedy EPA has attempted to address and balance those various competing concerns. Some of the specifics regarding the future uses of the Site will be determined during the design phase after further consultation with the interested parties.

The selected remedy contemplates some landscaped vegetation as a component of the cap. For many of the same reasons set forth in the response to the preceding comment, EPA does not believe that the landscaping would constitute a taking. As part of the remedial action, the landscaping would be a proper exercise of EPA's regulatory authority. Furthermore, since the Trust's property cannot presently be used for any business purpose, the selection of a remedy that included a greenbelt would not cause any diminution in the value of the property.

3.2 *Department of Toxic Substances Control, Comments to the Feasibility Study Report for Soils and Subsurface Gas*

1. The Department has in the earlier comments to the draft Feasibility Study (FS) stated that the acronyms STLCs and TTLCs were not correctly used and could mislead the reader. They are still found in certain places in the final FS to imply that if they are below STLCs and/or TTLCs, they are not hazardous. As stated in the Health & Safety Code Section 66699, STLCs/ TTLCs are used to determine if any waste is hazardous waste or not (Underlined for emphasis. See the definition for waste.)

Response: EPA recognizes that the use of STLCs/TTLCs is inappropriate for the discussion of the extent of contamination. However, previous studies referred to in the FS utilized this analysis, and it would be inappropriate for EPA to alter the discussion of these previous studies. EPA also recognizes, however, that in lieu of background levels or health-based risk standards, the

comparison of a material to its concentration that determines a hazardous waste is better than simply stating the results of the sampling. Without some kind of reference or context, the values may be meaningless to many of the readers.

2. The Department is concerned with any contaminated soils left in place, regardless of the alternative selected for the final remedy. The State has regulations on land use and definitely require some form of deed restrictions placed on the main reservoir and any other areas that have contaminated soils if they do not meet the requirements for an unrestricted land use. Unrestricted land use means that the land must meet risk criteria for residential land use.

Response: The selected remedy requires an evaluation of the contamination found on each parcel, with appropriate restrictions placed on parcels can pose a health risk. Please refer to Section 10.6 of the ROD for a more detailed description of the institutional controls. The final determination of restrictions for each property will be made during negotiations in design.

3. In relation to concerns presented by the community with regards to seismic activities, the following regulations should be considered as ARARs and be taken into consideration during the design phase:

   a. CCR Title 23, Section 2547 which states that structures which control surface drainage, erosion or gas should be designed to withstand the Maximum Credible Earthquake (MCE) without damage.

   b. CCR Title 22, Section 67108 which states that cover system and containment control features should be designed to withstand the MCE without the level of public health and environmental protection afforded by the original design being decreased.

   c. CCR Tile (22) 67418 which states that the cover be designed to accommodate the forces of earthquakes.

Response: EPA made a final ARARs determination in a letter to the State dated December 7, 1993. The regulations identified in parts (b) and (c) above have been repealed and are now incorporated into Title 22 CCR §66264.25 (b), which has been included as an ARAR. The regulation identified in part (a) is duplicative of the regulations in (b) and (c), so EPA does not consider it to be an ARAR.

4. The Department would like to make a few minor comments on the discussion on the risk assessment so they will reflect the current thinking on this subject:

   a. In the 3rd paragraph of Section 1.12, the risk were based on the average (geometric mean) of the contaminant concentration. DTSC generally uses the 95% Upper Confidence Level for this value.

   b. In Table 1-9, the age and the average weight given fits a "Student" better than an "Off-site Adult Residents".

   c. The Dermal Absorption Factors used were lower than currently acceptable values. For example, the dermal absorption factors for the Carcinogen PAHs and PCBs were stated as 0.02 and 0.07, respectively. The values used in the DTSC Preliminary Guidance Manual (7/29/93) were 0.20 and 0.14, respectively.

   d. In Table 1-13, the PRG for lead was indicated as 500 mg/kg. Presently acceptable levels are 130 ppm.

Response: EPA thanks the State for their comments to the Feasibility Study. In response to part (d), EPA refers to the Region IX PRGs for Fourth Quarter 1993 (November 1, 1993), which still identifies the PRG for lead, based on the Uptake Biokinetic Model, as 500 mg/kg for a residential soil exposure.

5. Section 1.6, 1st paragraph. Typo. The Groundwater Elevation Map is shown in Figure 1-4 and not in Figure 1-5 as stated in the text.

Response: The comment is correct; the figure was misidentified in the text.

3.3 *Water Replenishment District of Southern California*

1. The August 1993 EPA proposed plan announcement indicates that the majority of the non-disposal reservoir contaminated soils occur within 5 to 15 feet below ground surface. However, the "Preliminary Risk Assessment" prepared by the EPA contractor, Ebasco (December 1989) indicated that "The majority of subsoil contamination was detected at depths ranging from 10 to 20 feet" (Ebasco, 1989, p2-35). In addition, a review of soil sample analytical summary tables presented in the "Final Remedial Investigation Report" (Ebasco, November 1989) indicates that certain metals, volatile organic compounds, semivolatile organic compounds, pesticides, and polychlorinated biphenyls occur at potentially elevated concentrations to maximum depths of 50, 60, 60, 35, and 35 feet, respectively. We are therefore concerned that the depth of soils excavation may not be adequate

to prevent further leaching of contaminants into the ground water, particularly, if these areas remain undeveloped and are exposed to rainfall or landscape irrigation infiltration. The installation and periodic maintenance of an asphalt cap on the excavated area may limit, albeit not eliminate, this potential problem.

Response: The comment is correct that contamination exists deeper than 5-15 feet deep. EPA was trying to convey that there was little chance for exposure to surface contamination, and that most of the contamination was located <u>at least</u> 5-15 feet deep below the ground surface. Unfortunately, that was not how the Proposed Plan read.

2. We are concerned that certain contaminants in the existing former disposal reservoir may continue to migrate downward to the groundwater owing to the potentially high liquids content of some of the sludges that were deposited in the reservoir. The installation and periodic monitoring of a soil moisture lysimeter network adjacent to and beneath the disposal reservoir (the latter via angled borings) may alleviate this concern.

Response: EPA appreciates the commenter's concern regarding potential leaching of contaminants into the groundwater from the disposal reservoir. EPA has been monitoring the groundwater beneath the site, and will continue to monitor the groundwater until a groundwater remedy is selected. Since the site has been inactive for almost 30 years, EPA feels that once the infiltration of surface water is eliminated, the likelihood that any contaminant leaching will occur is small.

3. We are concerned that the ground water quality monitoring to be implemented as part of the proposed soil remedy is not to be considered as the final ground water remedy. To this end we intent to take an active role in reviewing and commenting upon data generated from the proposed ground water monitoring program and to work with EPA to develop groundwater protection strategies that will ensure groundwater quality in a cost-effective manner.

Response: Since EPA has not been able to determine that the WDI site is the source of contaminated shallow groundwater, EPA postponed the decision on a groundwater remedy until more data could be collected. The requirement for sampling as part of this remedy is to ensure that the selected remedy is not adversely impacting groundwater quality; it will also provide information for future groundwater actions. Also, since wastes will be left in place, sampling is a closure requirement, and is necessary for conducting five year reviews.

3.4 *Department of Toxic Substances Control Comments to WDI Proposed Plan*

1. Regardless of the alternative selected as the final remedy, it is expected that some contaminated soils will be left in place at the reservoir area and some surrounding areas at the site. Up to the present, no deed restrictions have been imposed on any parcel. However, the Department would require a voluntary deed restriction be recorded to limit the use of these areas.

   Health and Safety Code Section 2522.1 authorizes a landowner to agree voluntarily to a deed restriction on the property. However, if a landowner refuses to agree to a deed restriction, EPA or the State should require the landowner to clean up the contaminated areas and restore them to residential land use.

Response: Institutional controls are part of EPA's selected remedy. During the design of the remedy, EPA hopes to negotiate appropriate restrictions for each parcel of the site. If we cannot reach an agreement on voluntary restrictions for each parcel, the State has the authority under §25220 et seq. of the Health and Safety Code to make a determination that a particular property should be designated as "hazardous waste property" or "border zone property", with subsequent restrictions imposed on those properties.

2. The Department has determined that the design of the RCRA equivalent cap for Alternative 3C as illustrated in Figure 3 of the Proposed Plan is inadequate. Potential problems that have been identified and/or improvements that can be made are presented below:

   a. The location of the consolidated excavated soils in the cap is too shallow and does not allow any buffer zone or safety factor in the event of accidental or intentional penetration; and/or cracking/breaking of the asphalt cap and flexible membrane liner. As you know, some of the proposed excavated soils are contaminated and exposure could result in health risks.

   b. To minimize the exposure to the consolidated soils, it is suggested that the consolidated soil be buried as close as possible to the waste material by first removing some of the current 5-10 feet soil covering.

   c. Laying the asphalt directly over the flexible membrane liner is not advisable for the following reasons:

      (1) There is a possibility for the flexible membrane liner to tear should the asphalt crack or break which could occur during a major earthquake or as a result of subsidence.

(2) The flexible membrane liner may be damaged during installation by the heavy equipment rolling over the surface and from sharp stones lying next to the membrane liner. Generally, a layer of fine soil or sand is placed on the top and bottom of the membrane liner for protection. The soil layer also serves as a drainage layer and gas vent layer.

Response: EPA has included your recommendations in the description of the selected remedy. EPA will require that the excavated soil be placed under clean fill already located on the site. The clean surface fill will be scraped back in order to provide room for the excavated material. However, it is not advisable to expose the contaminated soil any more than necessary, so the excavated contaminated soil will be placed at least two feet below the ground surface, but will probably still remain above the unexcavated contaminated soil.

In response to the construction of the cap, EPA has decided to call out only a performance standard for the impermeable cap, so that issues like those brought up by the State will be addressed during the design of the cap. EPA recognizes that these issues are best addressed at that time.

3. DTSC does not object to a different type of cap other than that proposed in Alternative 3C, provided the remedial response objectives are maintained, i.e. "...to protect against and minimize the release of hazardous pollutants, or contaminants so that they do not migrate and cause substantial danger to present and future public health and welfare or the environment."

Response: EPA agrees that any remedy must be protective, and EPA's selected remedy will meet the remedial response objectives and be protective.

3.5 *Bear, Kotob, Ruby & Gross, on behalf of Dr. Adeline Bennett*

Dr. Bennett "would like to see a higher degree of environmentally friendly landscaping techniques employed in conjunction with the asphalt cap." She is also concerned about the degree of pollutants that may become airborne in any excavation of the perimeter properties. . . . At this time, Dr. Bennett objects to the transportation of such contaminates into a centralized collection area, as proposed. Dr. Adeline Bennett does not wish to waive any rights at this time, but stands ready to cooperate and entertain any proposal the EPA may propose.

Response: EPA intends for any landscaping that is done on the site to be environmentally sound, which will include low water consumption. We

share Dr. Bennett's concern that airborne contaminants may be released during the excavation, and will take precautions to minimize any release and the impact of the excavation to local air quality.

Dr. Bennett has stated that she objects to the consolidation of the contaminated soils in the central property. The comment does not offer a specific basis for that objection. To the extent that the objection is based on a theory that the consolidation would constitute a taking under the Fifth Amendment, EPA reiterates and incorporates by reference the response it provided above to the comment made by the Pitts Grandchildren's Trust on this issue (See Section 3.1 B). While EPA recognizes that the current property owners may object to the consolidation of contaminated properties onto the central portion of the site, that option is considered the most cost effective, and will remove contaminated soil from other parcels they own, as well as from other parties, in order to make the excavated parcels potentially useful for future development. An alternative that would leave all contaminated soils in place with a cap over the property would significantly impair the future usefulness of the various properties.

3.6 *State of California Department of Health Services*

1. Ensure that the cap, whether it is the proposed RCRA-equivalent cap or a clay/green cap, adequately covers the waste so that casual physical disturbance of the cap can not occur.

Response: EPA will ensure that the cap is protective and adequately prevents physical contact with the underlying contamination.

2. Ensure that the cap, whether it is the proposed RCRA-equivalent cap or a clay/green cap, adequately covers the waste so that water may not penetrate into the waste material.

Response: EPA will require that the cap meet an impermeable definition of 10^{-7} centimeters/second.

3. Ensure that the integrity of the cap can adequately withstand the strong seismic activity that has occurred in southern California and is predicted for the future.

Response: EPA has added seismic ARARs called out in the California Hazardous Waste Control Act, Title 22 CCR, §66264.25 (b), Seismic Design Standards.

4. Adequately maintain the fence in order to prevent public access to site, especially during future site disturbances when waste material is exposed.

Consider building a taller sound barrier-type fence along the side of the site adjacent to the school.

Response: During site activities, the site will be secured. In addition, a supplemental wall will be considered during design of the remedy, at which time the EPA can discuss the options with the City of Santa Fe Springs, the community, and St. Paul High School.

5. Conduct real-time air monitoring and air sampling before and during site disturbances, especially during the proposed soil excavations. Monitor and sample the air that is within the human breathing zone as well as on rooftops. Monitor for volatile organic compounds and particulate-associated compounds. Take samples during the site activities separate from samples taken during the time when no site activities are occurring. Include in the remedial design workplan a worker health and safety plan and a residential contingency plan that require certain health protective steps be taken based on the levels detected in the air monitoring and air sampling.

Response: EPA will conduct air sampling during site activities as suggested.

6. Ensure that the remedial action will involve collection and treatment of subsurface gases. The microbial production of gases other than methane may pose a long-term health concern to the employees working in the on-site buildings. Even if there is not enough methane to light a flare, another method of treatment may need to be considered.

Response: Consideration of treatment other than flaring is included in this decision, if a treatment option is required.

7. Address in the remedial design the following concern: although the waste material has not yet migrated laterally through the soil column, the addition of a cap may provide an additional force that would encourage lateral migration. If not taken into the account, the waste may surprisingly appear in the school's athletic fields or ooze through holes or cracks in the foundations of the on-site buildings.

Response: EPA will take these concerns into account during the design of the remedy to ensure that the remedy does not encourage migration of contaminated soil from under the capped area.

8. Require adequate institutional controls to ensure that there will be no penetration of the cap for development purposes. Deed restrictions that prevent digging or excavation of subsurface soils rather than a simple notice on the deed should be included as a part of the institutional controls.

Response: EPA will negotiate institutional controls with property owners that will be protective for any anticipated actions. Please refer to Section 10.8 of the ROD for a full description of the anticipated restrictions.

9. Require adequate institutional controls that prevent current owners or future owners for those commercial parcels with underlying waste material from carrying out activities which entails penetrating the subsurface soil and disturbing the waste material.

Response: EPA will negotiate institutional controls with property owners that will be protective for any anticipated actions. Please refer to Section 10.8 of the ROD for a full description of the anticipated restrictions.

10. Inspect the cap and surrounding area on a regular basis to ensure that the cap is intact, there is no spread of the waste material, and the institutional controls are working.

Response: EPA's selected remedy requires annual sampling and inspections.

11. Circulate the remedial design plan (including the worker health and safety plan and the residential contingency plan) to CDHS for public health review.

Response: EPA looks forward to working with CDHS in the future, and will provide material for their review, and endeavor to include them in any future community discussions.

3.7 *City of Santa Fe Springs*

1. The City's preferred alternative is to have the site completely free of contaminated soil. Implementation could be accomplished by excavating the soil and hauling it off-site for proper disposal or remediation. This solution would then allow unrestricted development of the site, and would totally alleviate any potential problems of human exposure to the contaminated soil.

Response: As explained during the Public Meeting, this alternative was evaluated by EPA and determined to be very costly for a subsequent small reduction in the long-term risks posed by the site, while increasing the short-term risks. Since the volume of contaminated materials is very large, the risks posed by them fairly low (almost within what EPA considers safe for residential use), and the estimated cost $120 million, complete removal is not considered a feasible option.

2. If the above excavate/haul alternative is deemed cost-prohibitive, then in-situ bio-remediation of the organic and hydrocarbon constituents of the waste

should be accomplished, and the remaining metal constituents be immobilized through chemical fixation. This solution would significantly reduce potential human exposure, and the site would have less prohibitive restrictions on development.

Response: As explained during the Public Meeting, the main risk posed by this site is due to the presence of arsenic, a naturally occurring metal in California soils. Arsenic poses a cancer risk, and can be toxic or have non-cancer health effects at high levels. For soil micro-organisms, arsenic can be toxic, and will kill them when they come into contact with the contaminant. For this reason, bio-remediation is impractical for this site.

As for chemically fixing the arsenic and other metals found in the soils at the site, this process involves mixing the contaminated soil with materials to basically "cement" the metals so that they cannot leach out. The mixture that is used to "fix" the soil must be carefully determined, so treatability studies must be done to formulate the chemical mix. The fixation process cannot be done while any bio-remediation is taking place, so the treatment would have to wait until the bio-remediation is complete. The soils would be treated on-site, but would probably require excavation (unless the treatment process could be performed in-situ) and replacement once treatment was completed. Since the volume of contaminated soils is estimated at 750,000 yds^3, and at a minimum, the cost of treating the soils is estimated at $\$100/yd^3$ (from EPA technical staff estimates), the cost of this remedy would be approximately $75 million. This process would prevent the metals from leaching into the groundwater, but would still require restrictions on future use. This same result can be achieved by EPA's selected remedy at a much lower cost.

3. With regard to the peripheral contaminated properties, the City-preferred alternative is to bio-remediate the contaminated soils or excavate these soils and haul off-site for remediation. This action would alleviate the need of transferring the contaminated soil to the reservoir grounds, and consequently would allow the site to maintain its present topographical appearance.

Response: See above comment for a discussion of bio-remediation. As for hauling excavated soils off-site, this option was evaluated, but was discarded because it raises the cost of the remedy significantly without providing appreciable, additional risk reduction. Since the area proposed for consolidation is already contaminated and includes the reservoir, the consolidation would not greatly increase the risk posed by the reservoir area. During consolidation and site grading, EPA will endeavor to maintain the site's current topographical profile, since the site is not smooth and flat at present.

4. In some places the depth of clean uncontaminated cover soil is reported to be at least 15 feet. Upon completion of remediation the site should be regraded to lower the overall height of the mound as much as possible.

Response: The current site mound height is mainly due to the presence of the old concrete reservoir, and the clean fill covering it. It would not be desirable to remove this soil cover, which would expose the disposed material in the reservoir, in order to flatten the site topography. However, every opportunity will be taken to fill in holes, and minimize the slopes on the site. But since the concrete reservoir is above the level of the street, the site will retain a higher profile than the surrounding properties.

5. Prior to the issuance of the Record of Decision the City requests that EPA establish the topographical profile of the site before and after completion of remediation. Knowing the final physical appearance of the site will assist the City in commenting on the plan as regards future development opportunities on the site.

Response: Current site profiles are available in the Final Groundwater Characterization Report of May 1989, Figures 2-7 through 2-9. A topographic map of the site can also be found, in Figure 3-2. Expected topographic profiles for the remedy can be included in the design work.

6. Prior to the issuance of the Record of Decision the City requests that EPA reveal the nature of the deed restrictions at the site upon completion of remediation and to which properties the restrictions will be applied. Knowing this will assist the City in commenting on the restrictions and perhaps recommending alternatives.

Response: As explained in Section 10.6 of this ROD, deed restrictions will be negotiated with site property owners. Specifics of the restrictions will be made at that time, but in general, will follow the outline in Section 10.8.

7. After the site is remediated we recommend that the current fencing along the northern boundary of the site (particularly along the St. Paul's High School property) be replaced with a concrete block retaining wall of sufficient height to restrict the view of the site from anywhere on the school's property, and of sufficient height to discourage students or others from climbing the wall. Furthermore, the school should be generally consulted in this matter so as to express its concerns regarding the wall's appearance and any landscaping that may be done.

Response: We have included the design option of a block wall or fence as part of the selected remedy. The exact configuration of any fence will be

determined during the design phase of this project, and will include public discussion of the issue. It may not be necessary to construct a fence, depending on the final configuration of the cap, if current trees remain after construction of the remedy.

8. EPA should place a gravel trench adjacent to St. Paul High School to act as a barrier to migration of methane gas. This is a precaution which has been required elsewhere in the City adjacent to landfills.

Response: This suggestion has been included as a design option of the remedy decision. The exact configuration and function of the trench, if any, will be determined during design.

9. In those areas where the asphalt cap is not applied and where development cannot take place (e.g., along the slope of the mound), the City requires some sort of low maintenance landscaping to reduce the possibility of unsightly weed growth.

Response: Areas that will be capped with vegetation will be landscaped to be low-maintenance. However, slopes may be paved with asphalt if that is the desired configuration of the cap. It is possible to pave on grades up to 50%.

10. EPA should better define and prepare a plan showing where and how surface water run-off from the site will be collected and disposed.

Response: The final design for the surface of the site will include uniform run-off. Surface water run-off will be directed to the storm sewers. Since the run-off will not be in contact with contaminated material, it will not be necessary to collect and dispose of it.

11. When weed abatement is permitted by EPA at the site prior to remediation, the City should be advised in advance of the work, and dust suppression should be used during the work.

Response: This has in the past been the usual operating procedure. However, EPA was not notified prior to the last weed abatement work that was performed at the request of the Fire Department of the City of Santa Fe Springs. The Los Angeles County Weed Abatement Program Project Manager was out of town when the request was received, so the work was begun without EPA notification. There should probably be only one more weed abatement prior to the implementation of the selected remedy. However, for any future weed abatement activities, better communication within the City's departments as well as with EPA will prevent further misunderstandings. As for dust suppression being used during any weed

abatement, though not necessary, may be possible, and will be discussed with the LA County Project Manager before the next abatement is begun.

12. There are numerous unmarked and unsealed barrels containing unknown substances on the site. The presence of these unmanaged barrels pose a potential fire and safety hazard, as well as a public nuisance. EPA should address the management of these barrels immediately, and not wait until remediation is under way.

Response: These containers were addressed in a letter to the City of Santa Fe Springs dated November 4, 1993. The containers were evaluated by EPA during the removal action taken in March 1988. The containers were determined to contain non-hazardous waste material that did not qualify for action under EPA removal authority. These containers will be addressed by EPA's selected remedy.

3.8 *Albert L. Sharp, Mayor Pro Tem, City of Santa Fe Springs*

". . . Environmentally Safe Products Corporation (ESP) has contacted my office and made me aware of the option of using biodegradable products to promote degradation of contaminates. ESP also believes that they have environmentally safe products which could be used to fixate, in place, the non-biodegradable contaminates and to seal the surface of the site. . . . In assessing the alternatives and before selecting the final WDI clean up strategy, EPA should give further consideration to the new technologies which may be available in the marketplace. ESP represents the type of approach which may provide EPA, The City of Santa Fe Springs, and a surrounding property owners with a more cost effective and minimal risk alternative."

Response: Please see the response to the City of Santa Fe Springs comment on bio-remediation and chemical fixation. EPA contacted Environmentally Safe Products Corporation to investigate their proposal for remediating this site. The materials we received are included in this Responsiveness Summary. EPA feels that the proposal received by ESP was inadequate, and could not use it to determine the effectiveness of the proposed processes. EPA did not receive any information concerning past successes with the ESP processes, nor any participation by a regulatory agency, EPA or state. In addition, the materials EPA did receive (mainly the Material Safety Data Sheet for the soil sealer) show that the material is 100% water soluble, which would not be desired to keep water from infiltrating the soil. Since the proposal required the use of unproven technologies, its selection would require extensive treatability studies and evaluation, during which no other remedy would be implemented. EPA feels that its selected remedy is the most cost effective, protective measure currently available.

3.9 *Phil Campbell*

". . . I am very supportive of your Number 3C proposal. I would hope that this proposal will be decided upon and initiated within a short time! . . . I would appreciate it if you could give me a time frame as to when we could expect to have the contamination removed and what those specific plans are!"

Response: EPA hopes that work on the design will begin in early 1994. Once the design is underway, EPA will conduct additional public meetings to discuss the schedule and progress of the project.

4.0 Public Meeting Comments

During the Public Meeting of September 1, 1993, a court reporter was present to provide a transcript of the meeting. EPA received several questions and comments on the Proposed Plan and general site conditions. Many of these comments have already been addressed in Section 2.0 of this Responsiveness Summary, Major Issues and Concerns. EPA feels that the following comments received during the Public Meeting (page numbers are those of the transcript) warrant a specific response.

4.1 *Page 24, line 3, Mr. Sharp*

" . . .why would not the fence be moved back to the green area (*capped area on overhead)* so all the white area, which had been excavated and the impurities removed from the soil, be able to be open for development?"

Response: The area that will be capped, and the area to be excavated, are both private properties. EPA's selected remedy requires that the cap be put in place to prevent direct exposure to the contamination and prevent rainwater infiltration. The restrictions on the property require that site activity be compatible with the cap design and that cap integrity be maintained. If the owners of the properties feel that this can be met with a fence, a fence can be placed around the entire cap. However, if the property owners wish all their property fenced, that is also their option. While the excavated properties will be free from development restrictions imposed by EPA, it does not necessarily follow that the properties will actually be developed.

4.2 *Page 41, Father Gallagher, Principal, St. Paul High School*

". . . it does strike me as a little bit strange that we already have a city government empowered to make decisions for the people within the City, but that the EPA would come in and become more restrictive than you feel that the City of Santa Fe Springs would be with our already elected officials, and you would put something--

you would force the city to comply beyond just the normal level of concern that the people who live right here in the City would already have about what is going on in the City. . . The second thing is -- it has to do with the whole idea about the word contamination is that, you know, there's a lot of parents here who have children who go to St. Paul, and when people think contamination, I think that a lot of times they're thinking about nuclear contamination, the threat of what is airborne, what is soil-born, and I was led to understand in our conversations that actually that whatever contamination there is really a metallic contamination from a very minor kind of a normal industry output like oil, sludge that was a part of what was going on here, and actually that will not ooze from one piece of property to the next piece of property without any kind of a major catastrophe."

Response: EPA's authority to respond to actual or potential environmental health risks was granted by the United States Congress under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, also known as Superfund. This law was amended in 1986 by the Superfund Amendments and Reauthorization Act (SARA). These laws give EPA authorities not granted to local governments to address environmental issues.

Concerning the word "contamination", it is an accurate term for the substances found at the WDI site. Though the materials are not nuclear in origin or pose a radiological hazard, the site is not without risk. While some of the contamination comes from a "normal industry" like the oil industry, this does not reduce the hazard to human health. Some of the contaminants found at the site are potential or known human carcinogens, while others have non-cancer health effects. We do not want to minimize the potential dangers of the substances found at the site, nor do we wish to unduly alarm people. Although current risks are small, eliminating exposure to these hazardous substances (the "contamination") will further reduce the risks posed by the site.

Lastly, EPA believes that the selected remedy will adequately contain the contamination, and that migration of the contaminated materials will not be a problem. We will monitor the site annually and evaluate the effectiveness of the chosen remedy to ensure that the selected remedy is performing to EPA expectations.

4.3 *Page 48, line 22, Father Gallagher*

". . .I think there would be some liability on the part of the government for . . . putting in something where we would be concerned about -- I would always be concerned about well, what's happening over there which we have no control over? I would have control over who was on our property, but I wouldn't have

control over who is standing on the piece of property above us looking down at the students who are unprotected. So, you know, it's simply a question or a comment, but I do think that there'd (be) some governmental liability if something were to occur."

Response: EPA, under CERCLA, has the responsibility to protect human health and the environmental from potential and actual releases of hazardous substances. With the implementation and proper operation and maintenance of the remedy, this responsibility will be met. Since the site is located on privately owned property, any activities occurring on the site that St. Paul High School jeopardizes the safety of their students are the responsibility of the property owners. If the integrity of the remedy is compromised, the situation would warrant EPA attention. However, EPA does not assume any liability for actions taken by private parties on private property.

4.4 *Page 50, line 6, Mr. Sharp*

"Why wasn't bioremediation put in there as one of the alternatives? It's a method we've used successfully of cleaning up some of the oil properties in the City the City wanted to redevelop during the redevelopment agency. I don't see that listed as any type of alternative, yet it's probably the most successful method currently used throughout the world."

Response: Please refer to the previous discussions on the lack of bio-remediation options for arsenic contamination in Section 3-7, page 3-16. It was screened during the Feasibility Study and discarded due to the inability to reduce the main risk at the site.

4.5 *Page 54, line 5, Mr. Cabral*

"I've worked on the one (*methane flare*) in Rose Hills, and that makes a lot of noise."

Response: The amount of noise will be considered when the design of any flare is undertaken. However, with the limited amount of methane that is anticipated, any noise generated at the site should be minimal.

4.5 *Page 62, line 4, Ms. Aguilar*

"My comment is that. . .we have children playing out there every day hard, breathing hard, breathing that gas you're going to put up in the air hard right next to it. I'm talking a few feet from there. Why can't they just clean it? Clean it."

Response: As stated in the Public Meeting, no gases were detected at the surface of the site other than typical ambient (local) air. We are concerned that any site contaminants not impact the students, however, and will investigate treating gases that are generated at the site, if necessary. However, if the amount and types of gases that are generated are below acceptable risk standards, the gases will be emitted into the atmosphere. Any emissions will have to meet both health standards and California air quality regulations. As previously explained, the cost of removing the contaminated materials is too high for the limited amount of risk reduction ultimately achieved. Also, complete excavation of the site would increase the short-term risks to the surrounding residents and students, even while meeting all emissions standards. The additional emissions just from the trucks would be significant. At present, there aren't any known technologies that can "clean up" the site.

4.6 *Page 66, Father Gallagher*

"I would like to say that we are very appreciative of the work of the EPA. . .If in conjunction with the City of Santa Fe Springs, who we believe are responsible individuals elected by the members of the City, that something should be decided to be done on that property, that we would prefer that nothing would be above the level of the property in terms of business where we would have to be concerned about the safety of the students at some future date based on a decision of somebody other than us about who is going to own that property or use that property or we would want something, for example, a wall or the government to provide some kind of protection so that we would not have to be concerned about the safety of our students, so if we had a comment to make I would think that it would be that we would prefer that it not be asphalt, that it would remain exactly the way it is, and if there is absolutely no problem right now and if I could build a house there that I could live on for 70 years with no problem, well, then I would just as soon see that things be left as they are right at this moment."

Response: EPA has taken your comment into account regarding public discussion of future uses of the site, as well as having a design option for a wall or enhanced barrier between the site and St. Paul High School. As for the safety of the students being jeopardized by any activities on the site in the future, EPA cannot at present envision any such activity that would be allowed and also protect the integrity of the cap. Also, the final configuration of the cap will be decided during the design phase, and the public will be able to comment and contribute their opinions to the final appearance of the site.

4.7 *Page 67, line 6, Mr. Sharp*

"Along with Father Gallagher, I as a City Councilman in this City have no desire to see anything happen on that site as far as a storage yard or anything. I think every member of the EPA in this room knows how I feel about putting asphalt down. I don't want to see a black or a green mountain. As far as I'm concerned, if there's nothing wrong with the soil, why don't we just plant wild flowers over it, make it as aesthetically pleasing to the community as we possible can and let that sleeping dog lie if there's no -- all we're doing is just covering it so someone can come in and set some tractors and trucks and travel trailers and whatever else on it. No, I'm not in favor of that."

Response: As previously discussed, the final use of the property will be decided upon by EPA, the City of Santa Fe Springs, and the property owners, along with contributions by the general public. The possibility of a "green" cap has been evaluated, and the limitations of this type of cap, mainly the ease with which it can be pierced, was also presented at the Public Meeting. The final configuration for the surface of the cap will be decided upon during design, with community involvement throughout the process, and can include some "green" cover.

4.8 *Page 68, line 20, Ms. Calderone*

". . . my comment and concern basically goes back to seismic activity. I have children that go to St. Paul. If we have a major catastrophe -- it could be today, tomorrow, ten years from now -- my kids have to go out there on that field. Is there any warning signs, bells or something to say that, you know, there is toxic waste going out in the air, methane gas? Are they going to be exposed and harmed by this if they're out there in the field? I mean what is the limits to where they would be exposed?"

Response: EPA has included seismic requirements into the selected remedy. In the unlikely event that there is a major exposure of the contaminated materials at the site, the risks would still prove fairly small, since the highest risk from the site was long-term, direct exposure to the contamination for residents on the site. Since there are no residents living on the site, the risks are less for the students attending St. Paul High School next door.

4.9 *Page 70, line 12, Mr. Calderone*

"You're talking about putting the daisies and everything. Is there any way that you can put a nicer looking fence instead of barbed wire or a higher fence?"

Response: Once the remedy construction is completed, there will be no requirement for fencing the site, unless it is determined that a fence is needed to protect the cap. Otherwise, any fencing would be at the discretion of the property owners. EPA has included a block retaining wall as a design option for the remedy that may be placed between the site and St. Paul High School.

4.10 *Page 72, line 4, Mr. Moreno*

"And there have been reports of odors. I don't know how many people have gotten sick. There's been -- there have been those reports."

Response: EPA has had only anecdotal evidence of any odors emitted from the site in recent history (since the site was closed and covered with soil). We have also not received any notice that anyone has been made ill from the site. Since no emissions were detected at the site, we can only conclude that the site is not currently the cause of illness or source of odors. The reports referred to reports of a "gas cloud" observed after an earthquake. However, this observation was disputed by the principal of St. Paul High School as having originated at another site, upwind of WDI and the high school.

4.11 *Page 74, line 1, Mr. Lazaretto*

"Some work beforehand should be done to make representation of how -- how the site will look given the fact that more earth is going to be placed on top so that there's some good idea so people can make, I think, an informed decision of how it's going to look ultimately."

Response: A representation of the final appearance of the site will be made during the design phase of this project. Various options should be presented at that time for public evaluation and comment.

4.12 *Page 77, line 11, Father Gallagher*

"I think that some people have indicated here this evening that they're confused. If you will not take away everything that is on the property right now, why would you ever accept that we would want you to dig in some of the area that you consider contaminated and put that contaminated soil on top of five feet of soils that is not contaminated and then guarantee us that that is going to be protected by whatever you do with it when you're using the argument that it would be safer for us to not -- not to touch -- not to move it from that area at all? So that's why I think that there has to be a clarification about the word contamination because I have been led to believe that we're using the word contamination, and there is

probably a possibility of contamination on that piece of property that might not be any different than the back yard of somebody in Santa Fe Springs in some areas of contamination."

Response: EPA's selected remedy proposes moving some of the contaminated material that is more readily accessible and consolidating the contamination into a smaller area. This excavation and consolidation will be performed under carefully controlled operations to limit contact with the contaminated soils, so the workers will be exposed to minimal risks. Dust suppression will be used to protect non-workers as well. In order to provide more protection, the surface soil in the consolidation area will be partially removed in order to provide a thicker protective barrier between contaminated soils and the surface.

Although some of the contaminants found at WDI are also found in the background soils in the Santa Fe Springs area, they are found at the site at greater levels than is considered healthy. They are also found at levels higher than background, so in that respect are not like backyard soils. There are also contaminants that are not found in the background, and are present as a result of previous industrial activity at the site. The excavation will be performed to remove the contaminated soils of the sumps to the protective levels established in the Section 10.1 of the ROD.

4.13 *Page 81, line 13, Brother Dennis*

"My concern is that's a fairly ugly looking thing, and I obviously would be more -- the green field is obviously more pleasing to look at."

Response: Thank you for your comment. We will consider aesthetics during the design phase of this project.

4.14 *Page 86, line 7, Father Gallagher*

"One comment, and it would be a very brief one, is that I'd like to reiterate that the position of the school is that we'd be very reluctant to have any business up above the level of the school yard where we would have to be concerned about the safety of the students and always be wondering well, who was going to be looking down on them since -- since the field is used for a lot of different activities, so this is a different safety, so I would hope that the EPA would also allow for that if they're going to be making some kind of improvements in the area."

Response: As previously stated, final uses for the site will be determined during the design phase of this project; we will try to address concerns similar to those stated in the comment at that time.

ATTACHMENT A

WRITTEN COMMENTS

STATE OF CALIFORNIA — CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY PETE WILSON, Governor

DEPARTMENT OF TOXIC SUBSTANCES CONTROL
1011 N. GRANDVIEW AVENUE
GLENDALE, CA 91201
(818) 551-2800

September 9, 1993

Mr. Rusty Harris-Bishop
U. S. Environmental Protection Agency
Region 9 - Superfund, H-7-2
75 Hawthorne Street
San Francisco, CA 94105

Dear Mr. Harris-Bishop:

WASTE DISPOSAL, INC. FEASIBILITY STUDY REPORT FOR SOILS AND SUBSURFACE GAS

The Department of Toxic Substances Control (Department) has completed the review of the subject report dated August 2, 1993 and have the following general and specific comments.

1. The Department has in the earlier comments to the draft Feasibility Study (FS) Report stated that the acronyms STLCs and TTLCs were not correctly used and could mislead the reader. They are still found in certain places in the final FS to imply that if they are below STLCs and/or TTLCs, they are not hazardous. As stated in the Health & Safety Code Section 66699, STLCs/TTLCs are used to determine if any waste is hazardous waste or not (Underlined for emphasis. See the definition for waste).

2. The Department is concerned with any contaminated soils left in place, regardless of the alternative selected for the final remedy. The State has regulations on land use and definitely require some form of deed restrictions placed on the main reservoir and any other areas that have contaminated soils if they do not meet the requirements for an unrestricted land use. Unrestricted land use means that the land must meet the risk criteria for residential land use.

3. In relation to concerns presented by the community with regards to seismic activities, the following regulations should be considered as ARARs and be taken into consideration during the design phase:

   a. CCR Title 23, Section 2547 which states that structures which control surface drainage, erosion or gas should be designed to withstand the Maximum Credible Earthquake (MCE) without damage.

   b. CCR Title 22, Section 67108 which states that cover system and containment control features features should be designed to withstand the MCE without the level of public health and environmental protection afforded by the original design being decreased.

   c. CCR Title 67418 which states that the cover be designed to accommodate the forces of earthquakes.

4. The Department would like to make a few minor comments on the discussion on the risk assessment so they will reflect the current thinking on this subject:

   a. In the 3rd paragraph of Section 1.12, the risk were based on the average (geometric mean) of the contaminant concentration. DTSC generally uses the 95% Upper Confidence Level for this value.

   b. In Table 1-9, the age and the average weight given fits a "Student" better than an "Off-site Adult Residents".

   c. The Dermal Absorption Factors used were lower than currently acceptable values. For example, the dermal absorption factors for Carcinogen PAHs and PCBs were stated as 0.02 and 0.07, respectively. The values used in the DTSC Preliminary Guidance Manual (7/29/93) were 0.20 and 0.14, respectively.

   d. In Table 1-13, the PRG for lead was indicated as 500 mg/kg. Presently acceptable levels are 130 ppm.

5. Section 1.6, 1st paragraph. Typo. The Groundwater Elevation Map is shown in Figure 1-4 and not in Figure 1-5 as stated in the text.

If you have any questions, please call me at (818) 551-2880.

Sincerely,

Amancio Sycip
Site Mitigation Branch

cc: Hamid Saebfar
Department of Toxic Substances Control
1011 N. Grandview Avenue
Glendale, CA 91201

Dr. Lou Levy
Department of Toxic Substances Control
1011 N. Grandview Avenue
Glendale, CA 91201

ERNEST BROWN & COMPANY

CONSTRUCTION & ENVIRONMENTAL LAWYERS

Irvine

Phoenix

San Diego

San Francisco

September 9, 1993

Federal Express

Mr. Rusty Harris Bishop
U.S. EPA, Region IX
75 Hawthorne Street
San Francisco, CA 94105

Re: Public Comment on Preferred Alternative
Waste Disposal, Inc. Superfund Site
Our File No.: 1353-01

Dear Mr. Harris Bishop:

On behalf of the Pitts Grandchildren's Trust, we make the following public comments with respect to the Waste Disposal, Inc. (WDI) Superfund Site:

A. RCRA-Equivalent Cap

1. Depth of Liner: While the EPA has expressed a desire to facilitate the reuse of the property where the proposed cap is to be placed, the present cap configuration prevents viable economic use of that property. Provision should be made to place the impermeable liner and the consolidated excavated soil at a greater depth with relation to the asphalt surface. Since the consolidated excavated (i.e., contaminated) materials lie directly under asphalt and thin membrane, there is virtually no ability to place the type of minimal subsurface foundations necessary for likely use. For instance, any RV parking or other storage uses would require a series of fence posts and lamp posts which require shallow subsurface foundations.

2. Composition of Liner: In-depth consideration should be given to substituting a one foot clay liner in lieu of the proposed flexible membrane liner now being proposed. Such a clay liner may be more durable and may serves as an equal or superior barrier to infiltration of rainwater. The cost of a clay may also be more economical to construct. If a synthetic membrane is truly deemed the best alternative, testing and/or statistical results should be including in

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the ROD showing durability and longevity data on the proposed synthetic liner.

B. Contaminated Soils

1. Characterization: If the Preferred Alternative is implemented, there should be a more complete characterization of the contaminated soils to be excavated from the former waste handling areas (e.g. areas 3, 4, 6, 7, and Toxo Spray Dust area). Upon review of the Final Remedial Investigation Report (1989), there appears to be an insufficient number of borings placed in these areas (only two borings in some areas) and insufficient laboratory analyses performed. In particular, there appears to be too little data (e.g., only 3-4 analyses in some areas) regarding the lateral and vertical extent of volatile organics, semi-volatile organics, pesticides, PCBs, and metals.

2. Movement Across Property Boundaries: The Preferred Alternative contemplates moving contaminated soils onto the center property partly owned by the Pitts Grandchildren's Trust prior to capping. In the absence of express authorization from the Trust, this action, regardless of how logical in the macro sense or how well-intended, constitutes a trespass. The Trust would like confirmation by the EPA that it must obtain the permission of the Trust, or take the property and pay just compensation under the 5th Amendment, prior to implementing the Preferred Alternative.

C. Vegetation/Greenbelt Option

As part owners of the area which is proposed to be capped under the Preferred Alternative, the Pitts Grandchildren's Trust strenuously objects to any vegetation or greenbelt option which would make business ventures on the central property impossible. The EPA should continue its prior commitment to work hard in order to implement a remedy which allows for the maximum economic use of the property. A vegetation/greenbelt option would constitute a Taking under the 5th Amendment for which just compensation (i.e., lost profits on a yearly basis indefinitely) must be paid.

We appreciate your time and energy in addressing these important points and look forward to the written responses.

Very truly yours,

JOHN E. VAN VLEAR, Esq., R.E.A.

JVV:dlh

cc: Pitts Grandchildren's Trust
Lewis C. Maldonado, Esq. (EPA)

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WRD
WATER REPLENISHMENT DISTRICT
OF SOUTHERN CALIFORNIA

September 10, 1993

Mr. Rusty Harris-Bishop
United States Environmental Protection Agency
75 Hawthorne Street
San Francisco, CA 94105

Subject: Proposed Plan for Contaminated Soil and Subsurface Gas for Waste Disposal, Inc., Santa Fe Springs, California

Dear Mr. Harris-Bishop:

The Water Replenishment District of Southern California (WRD) appreciates the opportunity to submit comments for your consideration in reponse to the proposed soil remedy to be performed by the United States Environmental Protection Agency (EPA) at the Waste Disposal, Inc., site.

WRD is a special district established under the California Water Code. WRD manages the groundwater in the Central and West Coast Groundwater Basins of Los Angles County, which provide a portion of the water supply to approximately 3.5 million people in a service area that covers 420 square miles in southern Los Angeles County. The Waste Disposal, Inc., site is located wihin the Central Basin. As you can appreciate, sources of contaminantion that threaten groundwater supplies are of major concern to WRD.

It is our understanding that the proposed soil and soil gas remedy includes the excavation of variously contaminated soils in the vicinity of the former 42 million gallon disposal reservoir, placing and compacting these soils on top of the former reservoir and capping the combined wastes with a flexible plastic membrane liner and an asphalt surface seal. The implied intent of double liner construction over the waste pile would be to minimize infiltration of rainwater and potential leaching of contaminants into the ground water and to protect the public from direct or airborne exposure to surface contaminants. A gas collection/venting system with possible treatment is also proposed to reduce organic gas emissions associated with the decomposition of some of the waste constituents.

12621 E. 166th Street, Cerritos, California 90701 Phone (310) 921-5521 Fax (310) 921-6101

We further understand that ground water monitoring would be required under the proposed soils remedial plan to evaluate the effectiveness of this remedy relative to the potential migration of certain waste pile contaminants to the ground water.

The WRD is generally in concurrence with the proposed plan. However, there are several concerns that we have regarding ground water protection:

1. The August 1993 EPA proposed plan announcement indicates that the majority of the non-disposal reservoir contaminated soils occur within 5 to 15 feet below ground surface. However the "Preliminary Risk Assessment" prepared by the EPA contractor, Ebasco (December 1989) indicated that "The majority of subsoil surface soil contamination was detected at depths ranging from 10 to 20 feet." (Ebasco, 1989, p2-35). In addition, a review of soil sample analytical summary tables presented in the "Final Remedial Investigation Report" (Ebasco, November 1989) indicates that certain metals, volatile organic compounds, semivolatile organic compounds, pesticides, and polychlorinated biphenyls occur at potentially elevated concentrations to maximum depths of 50, 60, 60, 35, and 35 feet, respectively. We are therefore concerned that the depth of soils excavation may not be adequate to prevent further leaching of contaminants into the ground water, particularly, if these areas remain undeveloped and are exposed to rainfall or landscape irrigation infiltration. The installation and periodic maintenance of an asphalt cap on the excavated area may limit, albeit not eliminate, this potential problem.

2. We are concerned that certain contaminants in the existing former disposal reservoir may continue to migrate downward to the ground water owing to the potentially high liquids content of some of the sludges that were deposited in the reservoir. The installation and periodic monitoring of a soil moisture lysimeter network adjacent to and beneath the disposal reservoir (the latter via angled borings) may alleviate this concern.

3. We are concerned that the ground water quality monitoring to be implemented as part of the proposed soil remedy is not to be considered as the final ground water remedy. To this end we intent to take an active role in reviewing and commenting upon data generated from the proposed ground water monitoring program and to work with EPA to develop groundwater protection strategies that will ensure groundwater quality in a cost-effective manner.

We look forward to working with you and your staff in the remediation of the Waste Disposal, Inc., site. Should you have any questions, please contact me.

Very truly yours,

John Norman
General Manager

cc: Central Basin Water Association
Southeast Water Coalition
Harold Morgan (Bookman-Edmonston Engineering)
Tom Regan (Bookman-Edmonston Engineering)

STATE OF CALIFORNIA — CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY PETE WILSON, Governor

DEPARTMENT OF TOXIC SUBSTANCES CONTROL
1011 N. GRANDVIEW AVENUE
GLENDALE, CA 91201
(818) 551-2800

September 10, 1993

Mr. Rusty Harris-Bishop
U. S. Environmental Protection Agency
Region 9 - Superfund, H-7-2
75 Hawthorne Street
San Francisco, CA 94105

Dear Mr. Harris-Bishop:

COMMENTS TO WASTE DISPOSAL, INC. PROPOSED PLAN

The Department of Toxic Substances Control (Department) has completed the review of the subject plan and has the following formal comments.

1. Regardless of the alternative selected as the final remedy, it is expected that some contaminated soils will be left in place at the reservoir area and some surrounding areas at the site. Up to the present, no deed restrictions have been imposed on any parcel. However, the Department would require a voluntary deed restriction be recorded to limit the use of these areas.

   Health and Safety Code Section 2522.1 authorizes a landowner to agree voluntarily to a deed restriction on the property. However, if a landowner refuses to agree to a deed restriction, EPA or the State should require the landowner to clean up the contaminated areas and restore them to residential land use.

2. The Department has determined that the design of the RCRA equivalent cap for Alternative 3C as illustrated in Figure 3 of the Proposed Plan is inadequate. Potential problems that have been identified and/or improvements that can be made are presented below:

   a. The location of the consolidated excavated soils in the cap is too shallow and does not allow any buffer zone or safety factor in the event of accidental or intentional penetration; and/or cracking/breaking of the asphalt cap and flexible membrane liner. As you know, some of the proposed excavated soils are contaminated and exposure could result in health risks.

   b. To minimize the exposure to the consolidated soils, it is suggested that the consolidated soil be buried as close as possible to the waste material by first removing some of the current 5-10 feet soil covering.

c. Laying the asphalt directly over the flexible membrane liner is not advisable for the following reasons:

(1). There is a possibility for the flexible membrane liner to tear should the asphalt crack or break which could occur during a major earthquake or as a result of subsidence.

(2). The flexible membrane liner may be damaged during installation by the heavy equipment rolling over the surface and from sharp stones lying next to the membrane liner. Generally, a layer of fine soil or sand is placed on the top and bottom of the membrane liner for protection. The soil layer also serves as a drainage layer and gas vent layer.

3. DTSC does not object to a different type of cap other than that proposed in Alternative 3C, provided the remedial response objectives are maintained, i. e. "...to protect against and minimize the release of hazardous pollutants, or contaminants so that they do not migrate and cause substantial danger to present and future public health and welfare or the environment".

If you have any questions, please contact me at (818) 551-2880.

Sincerely,

for Amancio Sycip
Site Mitigation Branch

cc: Hamid Saebfar
Department of Toxic Substances Control
1011 N. Grandview Avenue
Glendale, CA 91201

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September 15, 1993

Environmental Protection Agency
Harris-Bishop
75 Hawthorne Street (H-1-1)
San Francisco, California 94105

Re: Waste Disposal Inc. in Santa Fe Springs - Superfund Site

Dear Mr. Harris-Bishop:

I am writing this letter on behalf of Dr. Adeline Bennett, one of the landowner's concerned with the Santa Fe Springs clean-clean-up projection. Thank you again for taking the time to explain the details of your proposals and giving her personal attention.

After extensive discussions with Dr. Bennett she wanted me to send this communication on to you to advise you that she is in agreement with your basic concept. She has a few suggestions concerning the aesthetics. She would like to see a higher degree of environmentally friendly landscaping techniques employed in conjunction with the asphalt cap.

Dr. Bennett is concerned about the degree of pollutants that may become airborne in any excavation of the perimeter properties which we are informed contain degrees of arsenic, burillium, chromium and other toxins. Digging up, loading, transporting and unloading hundreds of truck loads of dirt contaminated with these toxins would by necessity release some of them into the air. At this time, Dr. Bennett objects to the transportation of such contaminates into a centralized collection area, as proposed. Dr. Adeline Bennett does not wish to waive any rights at this time, but stands ready to cooperate and entertain any proposal the EPA may propose.

If you have any further questions concerning this matter, please do not hesitate to call.

Very truly yours,

BEAR, KOTØB, RUBY & GROSS
A Professional Corporation

By
GARY L. ANGOTTI

GLA/lch

cc: Dr. Adeline Bennett

STATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY

PETE WILSON, Governor

DEPARTMENT OF HEALTH SERVICES
2151 BERKELEY WAY
BERKELEY, CA 94704-1011
(510) 540-3657

September 21, 1993

Rusty Harris-Bishop
Remedial Project Manager
U.S. Environmental Protection Agency
75 Hawthorne Street (H-7-2)
San Francisco, CA 94105

Dear Mr. Harris-Bishop:

This letter is in response to your request for comments on the proposed plan that addresses contaminated soils and subsurface gases at the Waste Disposal, Inc. site in Santa Fe Springs California. The California Department of Health Services (CDHS), under cooperative agreement with the Federal Agency for Toxic Substances and Disease Registry (ATSDR), is currently preparing a Site Review and Update document (SRU) on this site as a follow-up to ATSDR's Preliminary Health Assessment for Waste Disposal, Inc. released November 15, 1988. The SRU will be forwarded to you for review and comment after it has undergone ATSDR's review process in Atlanta.

Staff from CHDS toured the perimeter of the Waste Disposal, Inc. site on March 1, 1993 and June 23, 1993. On September 1, 1993, Marilyn C. Underwood and Jane Riggan from CDHS, accompanied by yourself and U.S. EPA Community Relations Coordinator Angeles Herrera, toured the former reservoir area. These site visits and a review of documents related to the Waste Disposal, Inc. site resulted in the items listed below, which we would like to bring to your attention.

We support U.S. EPA's choice of capping in place as described in the Feasibility Study Report of August 2, 1993, and further discussed at the community meeting of September 1, 1993. However we have several recommendations for the remedial design phase:

1. Ensure that the cap, whether it is the proposed RCRA-equivalent cap or a clay/green cap, adequately covers the waste so that casual physical disturbance of the cap can not occur.

2. Ensure that the cap, whether it is the proposed RCRA-equivalent cap or a clay/green cap, adequately covers the waste so that water may not penetrate into the waste material.

3. Ensure that the integrity of the cap can adequately withstand the strong seismic activity that has occurred in southern California and is predicted for the future.

4. Adequately maintain the fence in order to prevent public access to site, especially during future site disturbances when waste material is exposed. Consider building a taller sound barrier-type fence along the side of the site adjacent to the school.

5. Conduct real-time air monitoring and air sampling before and during site disturbances,especially during the proposed soil excavations. Monitor and sample the air that is within the human breathing zone as wells as on rooftops. Monitor for volatile organic compounds and particulate-associated compounds. Take samples during the site activities separate from samples taken during the time when no site activities are occurring. Include in the remedial design workplan a worker health and safety plan and a residential contingency plan that require certain health protective steps be taken based on the levels detected in the air monitoring and air sampling.

6. Ensure that the remedial action will involve collection and treatment of subsurface gases. The microbial production of gases other than methane may pose a long-term health concern to the employees working in the on-site buildings. Even if there is not enough methane to light a flare, another method of treatment may need to be considered.

7. Address in the remedial design the following concern: although the waste material has not yet migrated laterally through the soil column, the addition of a cap may provide an additional force that would encourage lateral migration. If not taken into the account, the waste may surprisingly appear in the school's athletic fields or ooze through holes or cracks in the foundations of the on-site buildings.

8. Require adequate institutional controls to ensure that there will be no penetration of the cap for development purposes. Deed restrictions that prevent digging or excavation of subsurface soil rather than a simple notice on the deed should be included as a part of the institutional controls.

9. Require adequate institutional controls that prevent current owners or future owners for those commercial parcels with underlying waste material from carrying out activities which entails penetrating the subsurface soil and disturbing the waste material.

10. Inspect the cap and surrounding area on a regular basis to ensure that the cap is intact, there is no spread of the waste material, and the institutional controls are working.

11. Circulate the remedial design plan (including the worker health and safety plan and the residential contingency plan) to CDHS for public health review.

We appreciate the opportunity to provide our comments on the proposed plan for contaminated soil and subsurface gas at Waste Disposal, Inc. site. If further clarification is required, please contact myself at (510) 540-3657.

Sincerely,

Marilyn C. Underwood, Ph.D.
Associate Toxicologist
Environmental Health
Investigations Branch

cc: Ms. Gwen Eng
Regional Representative
Agency for Toxic Substances and Disease Registry
75 Hawthorne Street, H-1-2
San Francisco, CA 94105

Ms. Gail Godfrey
Technical Project Officer
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October 8, 1993

Mr. Rusty Harris-Bishop (H-7-2)
United States Environmental Protection Agency
75 Hawthorne Street
San Francisco, CA 94105

Subject: City of Santa Fe Springs' Comments on EPA Proposed Remediation Plan for Waste Disposal, Inc. Superfund Site

Dear Mr. Harris-Bishop:

The purpose of this letter is to communicate the City of Santa Fe Springs' comments on the EPA proposed remediation plan for the Waste Disposal, Inc. Superfund site. We have reviewed the summary of the plan, and have attended the Public Meeting held by EPA on September 1. We appreciate your presentation of the plan to the City Council on August 26.

General

Comment 1: The City's preferred alternative is to have the site completely free of contaminated soil. Implementation could be accomplished by excavating the soil and hauling it off-site for proper disposal or remediation. This solution would then allow unrestricted development of the site, and would totally alleviate any potential problems of human exposure to the contaminated soil.

Comment 2: If the above excavate/haul alternative is deemed cost-prohibitive, then in-situ bio-remediation of the organic and hydrocarbon constituents of the waste should be accomplished, and the remaining metal constituents be immobilized through chemical fixation. This solution would significantly reduce potential human exposure, and the site would have less prohibitive restrictions on development.

Comment 3: With regard to the peripheral contaminated properties, the City-preferred alternative is to bio-remediate the contaminated soils or excavate these soils and haul off-site for remediation. This action would alleviate the need of transferring the contaminated soil to the reservoir grounds, and consequently would allow the site to maintain it present topographical appearance.

EPA's Preferred Alternative -
RCRA Equivalent Asphalt Cap w/Limited Excavation

Comment 4: In some places the depth of clean uncontaminated cover soil is reported to be at least 15 feet. Upon completion of remediation the site should be regraded to lower the overall height of the mound as much as possible.

Comment 5: Prior to the issuance of the Record of Decision the City requests that EPA establish the topographical profile of the site before and after completion of remediation. Knowing the final physical appearance of the site will assist the City in commenting on the plan as regards future development opportunities on the site.

Comment 6: Prior to the issuance of the Record of Decision the City requests that EPA reveal the nature of the deed restrictions at the site upon completion of remediation and to which properties the restrictions will be applied. Knowing this will assist the City in commenting on the restrictions and perhaps recommending alternatives.

Comment 7: After the site is remediated we recommend that the current fencing along the northern boundary of the site (particularly along the St. Paul's High School property) be replaced with a concrete block retaining wall of sufficient height to restrict the view of the site from anywhere on the school's property, and of sufficient height to discourage students or others from climbing the wall. Furthermore, the school should be generally consulted in this matter so as to express its concerns regarding the wall's appearance and any landscaping that may be done.

Comment 8: EPA should place a gravel filled trench adjacent to St. Paul High School to act as a barrier to migration of methane gas. This is a precaution which has been required elsewhere in the City adjacent to landfills.

Comment 9: In those areas where the asphalt cap is not applied and where development cannot take place (e.g., along the slope of the mound), the City requires some sort of low maintenance landscaping to reduce the possibility of unsightly weed growth.

Comment 10: EPA should better define and prepare a plan showing where and how surface water run-off from the site will be collected and disposed.

Comment 11: When weed abatement is permitted by EPA at the site prior to remediation, the City should be advised in advance of the work, and dust suppression should be used during the work.

Comment 12: There are numerous unmarked and unsealed barrels containing unknown substances on the site. The presence of these unmanaged barrels pose a potential fire and safety hazard, as well as a public nuisance. EPA should address the management of these barrels immediately, and not wait until remediation is under way.

The City of Santa Fe Springs appreciates this opportunity to comment on the proposed remediation plan for the Waste Disposal, Inc. Superfund site. We look forward to working closely with EPA to finalize this plan to the mutual benefit of all those concerned, and to the beginning of remediation. Should you have any questions regarding our comments, please call.

Sincerely,

ROBERT G. ORPIN
Director of Planning & Development

cc: City Council
Don Powell, City Manager
N. Schnabel, Fire Chief
Andy Lazzaretto, Redevelopment Consultant
Andrea R. Abdullah, Environmental Coordinator
Dave Klunk, Environmental Protection Specialist, Fire Dept.

NATION-WIDE
AWARD WINNER

CITY OF SANTA FE SPRINGS

11710 TELEGRAPH ROAD, 90670-3658 - P.O. BOX 2120 - (310) 868-0511 - FAX (310) 868-7112

October 8, 1993

Rusty Harris-Bishop (H-7-2)
U.S. EPA, 75 Hawthorne St.
San Francisco, CA 94105

SUBJECT: Proposed Soils Remedy for the Waste Disposal, Inc. Superfund Site - Santa Fe Springs, California

Dear Mr. Harris-Bishop:

After reviewing the proposed plan for dealing with the contaminated soil and subsurface gas at the Waste Disposal, Inc. (WDI) site, and attending the community meeting at the Santa Fe Springs Library on September 1, 1993, it has come to my attention that there is an alternate remediation strategy available which the U.S. Environmental Protection Agency (EPA) should consider. As a result of the publicity surrounding the WDI project, Environmentally Safe Products Corporation (ESP) has contacted my office and made me aware of the option of using biodegradable products to promote degradation of contaminates. ESP also believes that they have environmentally safe products which could be used to fixate, in place, the non-biodegradable contaminates and to seal the surface of the site. If the representations made by ESP are correct, the cost to treat the WDI site, both in economic and physical terms could be significantly reduced.

In assessing the alternatives and before selecting the final WDI clean up strategy, EPA should give further consideration to the new technologies which may be available in the marketplace. ESP represents the type of approach which may provide EPA, the City of Santa Fe Springs and a surrounding property owners with a more cost effective and minimal risk alternative.

Please continue to keep me informed as you make progress on this project. I am very anxious to learn of your reaction to my comments.

Sincerely,

Albert L. Sharp
Mayor Pro Tem

CC: Mayor and City Council
Donald Powell, City Manager

Environmentally Safe Products-
Corporation
ESP Corp

Fax Fax Fax Fax Fax

Mailing & Shipping Address:
2100 Road to Six Flags E.
Arlington, TX 76011

Phone: 817-275-5533
Metro: 817 265-1903
Fax: 817-275-1311

To:	**Mr. Rusty Harris-Bishop**	Fax No:	**415/744-1917**
Company:	**Environmental Protection Agency**	No of pages including this page:	**2**
From:	**Leo Sanders**	Date:	**October 18, 1993**
Subject:	**Project "Santa Fe Springs"**		

Per our telephone conversation this afternoon, I am forwarding to you the one-page Santa Fe Springs information that we discussed. I will have the additional information sent to you this week.

Please call if you have any questions.

Best regards,

Leo Sanders/Dale English

Environmentally Safe Products Corporation
ESP Corp

PROJECT "SANTA FE SPRINGS"

The leaching and vaporization of contaminants on the site described into the environment (which includes adjacent rhziospheres and water tables), can only be accomplished by methods which involve "bond breaking", "complexing" and "bonding" of molecular structures.

These methods insure short-term and long-term reduction of migration and mobility of hazardous materials while long-term decomposition and degrading is being accomplished naturally by soil microbes.

We suggest that through a "piping" process, the "floor" of the waste area be saturated with a non-toxic siliceous formula which will bond the small particles short-term while long-term degradation by enhanced soil microbes is taking place.

The stages would be:

a. Injection of ESP624 (a siliceous complexing liquid) into the lowest strata of the contaminated area. This injection will prevent at least 96% of any possible leaching of contaminants.

b. Inoculation of ESP2001 microbes and enzymes into the soil area at 100 gallons per acre. This inoculation of a self-supporting "biomass" will naturally "break bonds" of various molecules and complex atoms of toxic products so that they cannot leach.

c. Laying ESP624 on top of this layer of contaminated soil to separate the biological sandwich.

d. Building of a "soil rhziosphere" which will cover the inoculated area, and inoculating this soil addition with ESP2001.

The technology involved in this is the forming of natural zeolites, microbial degradation, and immobilized enzymes. Short term protection is afforded by zeolite formation. Long term protection is afforded by microbial degradation and bond-breaking.

Environmentally Safe Products Corporation

ESP Corp

Fax Fax Fax Fax Fax

Mailing & Shipping Address:
2100 Road to Six Flags E.
Arlington, TX 76011

Phone: 817-275-5533
Metro: 817-265-1903
Fax: 817-275-1311

To:	**Mr. R. Harris-Bishop**	Fax No:	**(415) 744-1917**
Company:	**EPA**	No of pages including this page:	**5**
From:	**Leo Sanders**	Date:	**December 6, 1993**
Subject:	**SURFACEAL**		

Mr. Harris-Bishop:

The following information is for your review per your request.

Best regards,

Leo Sanders

Environmentally Safe Products™
CORPORATION
ESP Corp

December 6, 1993

Environmental Protection Agency
75 Hawthorne Street H-7-2
San Francisco, CA 94105

Attention: Mr R. Harris-Bishop

Dear Sir:

Surfaceal, ESP Corporation's trade name, was originally formulated to seal concrete and other road base materials, including the sand utilized in making concrete.

It has been approved by the United States Department of Agriculture for use in certain food establishments and by the Environmental Protection Agency for the treatment of concrete where potable water is involved.

Additional information will be furnished on request.

Very truly yours,
ESP Corporation

Leo Sanders
Executive Vice President

2100 Road to Six Flags East
Arlington, TX 76011
(817) 275 5533
FAX (817) 275 1311

Mailing & Shipping Address
2100 Road to Six Flags East
Arlington, TX 76011

ESP Corporation
Environmentally Safe Products Corporation

Phone: 817-275-5533
Metro: 817-265-1903
Fax: 817-275-1311

MATERIAL SAFETY DATA SHEET

Surfaceal

Non-toxic Enviornmental Sealant

SECTION I: MANUFACTURER / EMERGENCY CONTACT

ESP Corporation, 2100 Road to Six Flags East, Arlington, TX 76011
Emergency Phone: 817-275-5533
Information Phone: 817-275-5533
Date Prepared: 4/6/93

SECTION II: HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

Ingredient: None TLV: None

SECTION III: PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point (Degrees F)	230°F.
Vapor Pressure	N/A
Vapor Density	N/A
Specific Gravity	1.30-1.56 @ 20°C.
Melting Point	N/A
Evaporation Rate	N/A
Solubility in Water	100%
Appearance and Odor	N/A
pH	8.1

SECTION IV: FIRE AND EXPLOSION HAZARD DATA

Flash Point	None	Extinguishing Media	N/A
Flammable Limits	N/A	Special Fire Fighting	None
Lower Explosive Limit	N/A	Unusual Fire & Explosion	None
Upper Explosive Limit	N/A		

SECTION V: REACTIVITY DATA

		Conditions To Avoid
Stability	Stable	None
Incompatibility (Materials to Avoid)	Mineral acids, organic acids, non-ferrous metals.	
Hazardous Decomposition or Byproducts	None	
Hazardous Polymerization	Will not occur	None

MATERIAL SAFETY DATA SHEET (MSDS)
Surfaceal **- Page 2**

SECTION VI: HEALTH HAZARD DATA

Route(s) of Entry:
- Inhalation ..... No
- Ingestion ..... Yes
- Skin ..... Yes
- Health Hazards (Acute & Chronic): ..... None

Carcinogenicity Information:
- NTP ..... No
- IARC Monographs ..... No
- OSHA Regulated ..... No

Signs & Symptoms of Exposure ..... N/A
Medical Conditions Generally Aggravated by Exposure ..... None Known
Emergency & First Aid Procedures ..... In case of contact with skin, flush with water. In case of contact with eyes, wash with clean water (DO NOT USE EYEWASH SOLUTION).

SECTION VII: PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be taken in case material is released or spilled ..... Flush area thoroughly with water.
Waste Disposal Method ..... Mix with 20 parts water & dispose in ordinary drain.
Storing & Handling Precautions ..... Material will freeze at 0°F.
Other Precautions ..... Material will adhere to aluminum and glass

SECTION VIII: CONTROL MEASURES

Respiratory Protection ..... Not required

Ventilation:
- Local Exhaust ..... Acceptable
- Mechanical ..... Acceptable
- Protective Gloves ..... Rubber or Plastic
- Protective Clothing ..... Not Required
- Work/Hygienic Practices ..... Normal
- Special ..... Not Required
- Other ..... Not Required
- Eye Protection ..... Goggles
- Conditions to Avoid ..... None

Environmentally Safe Products Corporation

ESP Corp

PROJECT "SANTA FE SPRINGS"

The leaching and vaporization of contaminants on the site described into the environment (which includes adjacent rhziospheres and water tables), can only be accomplished by methods which involve "bond breaking", "complexing" and "bonding" of molecular structures.

These methods insure short-term and long-term reduction of migration and mobility of hazardous materials while long-term decomposition and degrading is being accomplished naturally by soil microbes.

We suggest that through a "piping" process, the "floor" of the waste area be saturated with a non-toxic siliceous formula which will bond the small particles short-term while long-term degradation by enhanced soil microbes is taking place.

The stages would be:

a. Injection of ESP624 (a siliceous complexing liquid) into the lowest strata of the contaminated area. This injection will prevent at least 96% of any possible leaching of contaminants.

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c. Laying ESP624 on top of this layer of contaminated soil to separate the biological sandwich.

d. Building of a "soil rhziosphere" which will cover the inoculated area, and inoculating this soil addition with ESP2001.

The technology involved in this is the forming of natural zeolites, microbial degradation, and immobilized enzymes. Short term protection is afforded by zeolite formation. Long term protection is afforded by microbial degradation and bond-breaking.

October 29, 1993

Rusty Harris-Bishop
U.S. EPA 75 Hawthorne St.
San Francisco, CA 94105

Dear Mr. Harris-Bishop:

This letter is in regards to your request for some public input to your several alternatives of concluding the investigation and remedial proposals of the Waste Disposal Inc. Superfund site.

I am very supportive of your Number 3C proposal. I would hope that this proposal will be decided upon and initiated within a short time!

As you know every other property within the bounds of the Superfund has been able to operate as though there were no restrictions on these individual properties. My particular piece of real estate does have limited contamination, and is under direct EPA authority as what can be done to establish it as a viable piece of property that can be developed.

I would appreciate it if you could give me a time frame as to when we could expect to have the contamination removed and what those specific plans are!

I would also like to work with you to establish the guilt of the parties that contaminated the property. I have been involved with the city in the possible selling of this property for development since 1982. As you can see many frustrating years have elapsed since the initial undertaking of the development of this property. Anything you can do to hasten an end to this long and bureaucratic experience would be certainly welcomed and appreciated.

I am 65 years old, and looking forward to having this piece of property developed before I die! Please endeavor to help me obtain my goal!!

Very truly yours,

Phil Campbell

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, Ca. 94105-3901

November 4, 1993

Mr. Albert L. Sharp, Mayor Pro-Tempore
City of Santa Fe Springs
11710 Telegraph Road
Santa Fe Springs, CA 90670-3658

RE: Waste Disposal, Inc. Superfund Site

Dear Mr. Sharp:

I would like to thank you for your letter of October 8, 1993 concerning the Proposed Plan for the Waste Disposal, Inc. (WDI) Superfund Site. I appreciate the information you provided both in the letter, and in our meeting of October 18, 1993. I am enthusiastic to develop a closer working relationship with the City so that we can develop a creative solution to the interesting issues posed by the WDI Superfund Site.

I have responded to the official City of Santa Fe Springs comment letter via separate correspondence (on which you are copied), but I wanted to thank you personally for you interest and activities concerning this site. I hope that I will be able to meet with the City Council again and discuss some of EPA's ideas regarding future use of the site, so that we can come to a mutually agreeable decision prior to the Remedial Design phase of the project.

Again, thank you for your concern and interest in this site. I look forward to working with you and your fellow council members in the near future.

Sincerely,

Rusty Harris-Bishop

cc: Lewis Maldonado (RC-3-1)
Dan Opalski (H-7-2)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, Ca. 94105-3901

November 4, 1993

Robert G. Orpin
Director of Planning and Development
City of Santa Fe Springs
11710 Telegraph Road
Santa Fe Springs, CA 90670-3658

RE: Comments on EPA's Proposed Plan for the Waste Disposal, Inc. Superfund Site

Dear Mr. Orpin:

I would like to thank you for submitting the City of Santa Fe Springs comments to EPA's Proposed Plan for the Waste Disposal, Inc. (WDI) Superfund Site, located in your city. Most of your comments will be addressed in the Responsiveness Summary of the Record of Decision (ROD), which should be completed by early December; however, there were a couple of items in your comment letter that I wanted to address prior to the issuing of the ROD. I also wanted to reiterate some of EPA's thoughts on future land use of the site, especially since City input will greatly affect the amount of creative thinking involved in determining and allowing for compatible uses of the site.

Comment 12, which requested EPA action on numerous barrels located on the southeast area of the site, has been addressed. These barrels were identified in 1988 by EPA as non- hazardous and not posing an imminent threat to human health or the environment, and therefore did not qualify for a removal action under EPA's removal action authority. I have spoken with Steve Koester of your Fire Department, as well as George Baker of the Los Angeles County Fire Department, and understand that there were oily petroleum products in some of the barrels, and that some appeared to be leaking. Petroleum products are not considered hazardous under federal regulations, but may be considered so under state regulations. The Santa Fe Springs Fire Department has covered the barrels with plastic, and that should prevent any further releases. The owner of the property is having the materials evaluated, and he will presumably take care of the disposal of the barrels. If not, these barrels will be taken care of during the Remedial Action. I have included the summary of the On-scene Coordinator's report from EPA's initial actions at the site. If further action is required, EPA may be able to send someone down to examine the facility and re-evaluate the hazards.

As for the weed abatement (Comment 11), the last effort was initiated at the request of the Santa Fe Springs Fire Department. While I am usually informed prior to the disking operations, it is not required, since EPA has determined that the disking does not pose a health threat to the community (mowing tends to create more dust, since it actually pulls dirt and dust up into the blades, and then directs it away from the mower). However, it would be desirable for the operation to suppress any excess dust, so I will make that suggestion to the LA County Weed Abatement Project Manager, Grace Murase. It is unfortunate that there was a complaint from a parent from St. Paul High School; the proposal to provide dust suppression during excavation for the remedy has been confused with dust suppression for the site in general. I explained the situation to Santa Fe Springs Fire Marshall Stan Betcher, and he feels comfortable with the decisions made, and will be able to provide information to any concerned citizens should this issue come up again.

As for your other comments, most will be addressed in the Responsiveness Summary of the ROD. Comments 4 and 10, though, will be addressed during the Remedial Design phase. For Comments 5, I would like to refer you to the Final Remedial Investigation Report, Volume I, Chapter 3. This chapter shows the topographical profile of the site and several cross-sections. A final topographical profile for the site will not be made until the design is completed.

Deed restrictions (Comment 6), as explained in the Proposed Plan, will be placed on the area where the cap will be constructed, in order to maintain the integrity of the remedy. In addition, restrictions will be placed on each parcel where the risk of contact with contaminated soil exists. These restrictions can be as simple as a voluntary notice on the deed that contamination exists under the property. If the property owners are not cooperative with EPA in placing the voluntary restrictions, the State may declare the property a hazardous waste property, which carries with it more severe use restrictions. A City zoning ordinance could also be used to restrict use of properties where there is underlying contamination, if desired. These decisions will be made during the design phase as well, since the ROD will describe only the requirements and actions that will be taken, with the specifics left for the Remedial Design. EPA hopes to restrict property use as little as possible, but will do what is necessary to prevent exposure to contamination existing at the site.

I would like to close by discussing some of the ideas EPA has come up with concerning future land use at the site. While EPA's selected remedy will be protective, we feel that we have a unique opportunity to be very creative in terms of future land use, and that we should expand our thinking to include other uses of the cap. Since restrictions that will be placed on the cap will not allow piercing the cap for

building or construction, any construction ideas would need to be discussed and included in the Remedial Design. From our meetings with the public, both at the public meeting and with the parents from St. Paul High School, we know that development of the site for use as a vehicle storage area is not desirable. However, there could be other uses for the asphalt surface, including tennis courts, basketball courts, or other recreational uses. EPA is willing to work with the City and the current property owners to develop some future use scenarios, but this will need to be done during design. Our ROD will most likely call for a hybrid cap, with an asphalt cap over the reservoir, and a soil and vegetation cap over the remainder of the contaminated area. We think that with the participation of the City, the property owners, the community, and EPA, we can develop a plan for use that will be beneficial to all concerned, and still maintain the integrity of the remedy and the protection required by our remedy. Again, I want to stress that EPA is very willing to work with the City in coming up with a viable use for the property that will be acceptable to all concerned parties; however, we need to have a plan in place so that we can design it into the remedy. If we cannot incorporate the future use ideas into the design, the cap restrictions will prevent any activity from taking place in the future.

I look forward to working with you on this site, and hope that we can come up with a creative, innovative solution to the problems posed by this Superfund site.

Sincerely,

--

Rusty Harris-Bishop
Remedial Project Manager

Enclosure

cc: Mayor and City Council of Santa Fe Springs (5 copies)
Don Powell, Santa Fe Springs City Manager
N. Schnabel, Santa Fe Springs Fire Chief
James Nishida, LA County Fire Department
Dan Opalski (H-7-2)
Lewis Maldonado (RC-3-2)

The Waste Disposal Incorporated Site
Santa Fe Springs, California

I. Summary of Events

The Waste Disposal Incorporated (WDI) Site is located at the intersection of Greenleaf Ave. and Los Nietos Road in the City of Santa Fe Springs, California. The site is rectangular in shape and approximately five (5) acres in size. The site is bounded to the north by a scrap metal dealer and a heat treating operation, to the east by Greenleaf Ave., to the south by Los Nietos Rd. and to the west by a lumber yard and several other small businesses. A private school is located within one block of the site.

From the 1940's through the mid 1960's the site served as a disposal facility that accepted drilling, refinery, milling and brewery wastes. The site was later capped with two feet of clean soil and currently listed on the EPA's National Priority List for remedial action.

In February 1988 Remedial Project Manager (RPM) John Kemmerer requested that the Emergency Response Section (ERS) conduct a preliminary assessment of the WDI site in order to determine the following:

- the nature and degree of hazard associated with approximately 200 drums stored on site
- the need to restrict access to the property

On March 2, 1988, the EPA/TAT Response Team arrived on site to conduct the assessment. During the course of the assessment, it was determined that the drums in question were either empty or contained non hazardous materials and would not qualify for a removal action.

Upon completion of the drum assessment, site access control options were considered.

Details of the day's activities are discussed in the TAT report dated March 15, 1988.

On March 3-4, 1988 the results of the assessment were discussed with RPM John Kemmerer and Betsy Curnow, Chief of the Enforcement Programs Section. As a result of these meetings it was agreed that:

- no action would be taken with respect to the drums of non-hazardous material.

15 Mar. 88

TAT submits report covering the preliminary assessment of the W.D.I. Site.

21 Mar. 88

TAT submits report covering fence specifications.

Action Memo approved by Jeff Zelikson.

Delivery Order issued to Riedel Environmental Services Inc.

24 Mar. 88

OSC Lewis and TAT Member Len Marcus meet on-site with Larry Boyle, Response Manager with Crosby and Overton and two potential fence sub-contractors.

28 Mar. 88

Two fence bids submitted to Crosby and Overton.

Fence sub-contractor selection made.

30 Mar. 88

Fence construction begins.

20 Apr. 88

All site fence keys turned over to Betsy Curnow.

27 Apr. 88

Fence Construction completed.

TAT submits final project report.

D. Contractor

This project was carried out by Crosby and Overton, a sub-contractor to Riedel Environmental Services Inc., the Zone 4 Emergency Response Cleanup Services (ERCS) contractor.

In general I would rate the performance of the contractor as "good".

III. Problems

None

IV. Recommendations

None

TRANSCRIPT FROM PUBLIC MEETING

VERBAL COMMENTS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 9 WASTE DISPOSAL, INC.

SUPERFUND SITE PROPOSED PLAN PUBLIC MEETING

TAKEN AT:	11710 TELEGRAPH ROAD SANTA FE SPRINGS, CALIFORNIA 90670
DATE/TIME:	WEDNESDAY, SEPTEMBER 1, 1993 7:10 P.M. - 9:00 P.M.
REPORTER:	KAREN M. KLEIN CSR NO. 5368, RPR/CM
JOB NO.:	93-1311

GOLDING COURT REPORTERS
CERTIFIED SHORTHAND REPORTERS
17785 CENTER COURT DRIVE, SUITE 440
CERRITOS, CALIFORNIA 90701
(310) 924-2724 • (909) 381-9228

APPEARANCES

FROM UNITED STATES ENVIRONMENTAL PROTECTION AGENCY:	ANGELES HERRERA DAN OPALSKI RUSTY HARRIS-BISHOP LEWIS MALDONADO
FROM CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY:	AMANCIO SYCIP

SANTA FE SPRINGS, CALIFORNIA, WEDNESDAY, SEPTEMBER 1, 1993

7:10 P.M.

* * *

MS. HERRERA: MAY I HAVE YOUR ATTENTION, PLEASE? WE WOULD LIKE TO GET STARTED.

GOOD EVENING, EVERYONE. MY NAME IS ANGELES HERRERA, AND I WORK WITH THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY IN SAN FRANCISCO. I AM THE COMMUNITY RELATIONS COORDINATOR FOR WASTE DISPOSAL, INCORPORATED SUPERFUND SITE KNOWN AS W.D.I. I WOULD LIKE TO THANK YOU ALL FOR ATTENDING OUR MEETING THIS EVENING. AS YOU CAN HEAR, ENGLISH IS NOT MY PRIMARY LANGUAGE SO PLEASE DON'T HESITATE TO STOP ME AT ANY TIME IF I'M TALKING TOO FAST OR IF I MISPRONOUNCE ANY WORDS.

(SPEAKS IN SPANISH.)

E.P.A. IS HERE TONIGHT TO PRESENT ITS PROPOSED PLAN FOR CONTAMINATED SOIL AND SUBSURFACE GASES AT WASTE DISPOSAL. WE'RE ALSO HERE TO ANSWER YOUR QUESTIONS AND TO TAKE YOUR COMMENTS. I HOPE YOU ALL GOT A CHANCE TO PICK UP A COPY OF OUR FACT SHEET ON THE WAY IN IF YOU DID NOT RECEIVE ONE IN THE MAIL. ALSO, I WANT TO APOLOGIZE. WE JUST FOUND OUT THIS MORNING THAT SOME OF THEM WERE NOT COMPLETE. APPARENTLY, OUR CONTRACTOR MADE A MISTAKE AND SENT OUT SOME FACT SHEETS INCLUDING TWO OF THE FIRST PAGE

AND THE MIDDLE PAGES WERE NOT INCLUDED, SO IF YOU RECEIVED AN INCOMPLETE COPY, PLEASE FEEL FREE TO PICK UP A COMPLETE COPY AT THE END -- ON THE TABLE AT THE END OF THE MEETING.

WE ALSO HAVE A PACKAGE WITH THE AGENDA AND THE OVERHEADS. WE'D ASK YOU TO PLEASE PICK UP A COPY OF THIS BECAUSE THIS WILL BE VERY HELPFUL FOR YOU TO FOLLOW THE PRESENTATION.

AND WE HAVE A SIGN-IN SHEET. WE'RE ASKING YOU TO SIGN THOSE SHEETS SOMETIME THIS EVENING, AND THE REASON WE HAVE THE SIGN-IN SHEET IS BECAUSE THAT'S OUR PRIMARY SOURCE TO UPDATE OUR MAILING LIST, SO IF WE DON'T HAVE YOUR NAME IN THE MAILING LIST, IT'S EXTREMELY IMPORTANT FOR YOU TO SIGN THE SHEET, SO WE WILL PUT YOU ON THE MAILING LIST AND YOU WILL RECEIVE FURTHER INFORMATION.

NOW I WOULD LIKE TO INTRODUCE RUSTY HARRIS-BISHOP, E.P.A.'S PROJECT MANAGER FOR THE SITE; DAN OPALSKI, E.P.A. SECTION CHIEF FOR THE SITE; LEWIS MALDONADO, E.P.A.'S ATTORNEY, AND WE ALSO HAVE THE STATE E.P.A. COUNTERPART, AMANCIO SYCIP, CALIFORNIA E.P.A. WE HAVE A TOXICOLOGIST FOR THE CALIFORNIA DEPARTMENT OF HEALTH SERVICES. HER NAME IS MARILYN UNDERWOOD. WE ALSO HAVE THEIR COMMUNITY RELATIONS COORDINATOR, JANE RIGGAN.

AS YOU NOTICE, WE HAVE A COURT REPORTER WITH US THIS EVENING. SHE'S HERE TONIGHT TO RECORD THE ENTIRE MEETING, AND THEN SHE WILL WRITE OUT A TRANSCRIPT OF THE

MEETING. THIS TRANSCRIPT WILL BECOME A PART OF THE DOCUMENT THAT WILL DOCUMENT THE DECISION THAT E.P.A. WILL MAKE. THIS DOCUMENT IS CALLED THE RECORD OF DECISION.

WE NEED YOU TO SPEAK LOUD, TO STATE YOUR NAME AND AFFILIATION FOR THE RECORD, AND SHE WILL STOP YOU IF SHE DOESN'T GET YOUR NAME, AND WE ASK YOU TO PLEASE SPELL IT FOR HER.

LET ME MAKE SURE OF TELLING YOU EVERYTHING I SHOULD BE TELLING YOU.

NOW I'M GOING TO TAKE A MINUTE TO RUN THROUGH TONIGHT'S AGENDA. FOLLOWING THE INTRODUCTION, WE WILL BE HEARING FROM DAN OPALSKI, WHO WILL BE COVERING THE SUPERFUND PROCESS IN GENERAL. THEN RUSTY -- AND THAT'S GOING TO TAKE APPROXIMATELY FIVE MINUTES, AND THE REASON WE'RE PUTTING TIME TO EVERY AGENDA ITEM IS BECAUSE WE NEED TO BE OUT OF HERE BY NINE O'CLOCK, BUT WE WANT TO MAKE SURE THAT WE ANSWER ALL YOUR QUESTIONS, BUT THE MAIN REASON OF HAVING THIS MEETING IS TO TAKE YOUR COMMENTS, AND THE COURT REPORTER IS ONLY GOING TO BE HERE UNTIL NINE O'CLOCK, SO WE MAY HAVE TO STOP THE QUESTIONS TO GO INTO THE COMMENTS BECAUSE WE WANT TO MAKE SURE WE TAKE ALL YOUR COMMENTS, AND THEN IF IT'S NINE O'CLOCK AND WE NEED TO STAY LONGER TO ANSWER YOUR QUESTIONS, WE WILL BE GLAD TO DO IT OUTSIDE THE ROOM.

THEN RUSTY WILL BE TALKING ABOUT -- HE WILL BE

PRESENTING OUR PROPOSED PLAN, AND HE WILL ALSO BE COVERING THE DIFFERENT ALTERNATIVES THAT ARE BEING CONSIDERED FOR THE SITE, AND THAT'S GOING TO TAKE APPROXIMATELY 15 MINUTES, SO IN TOTAL, THE WHOLE PRESENTATION WILL PROBABLY BE LIKE 20, 25. THEN WE'RE GOING TO HAVE A QUESTION AND ANSWER SESSION. DURING THIS QUESTION AND ANSWER SESSION, WE ENCOURAGE YOU TO ASK ANY QUESTIONS OR ANY ADDITIONAL CLARIFICATION YOU MAY NEED REGARDING E.P.A.'S PROPOSED PLAN OR ANYTHING YOU HEAR TODAY OR IF YOU HAD A CHANCE TO REVIEW OUR FEASIBILITY STUDY AND YOU HAVE ANY QUESTIONS REGARDING OUR FEASIBILITY STUDY, YOU CAN ASK THOSE QUESTIONS DURING THE QUESTION AND ANSWER SESSION. THEN WE WILL -- AND THAT'S PROBABLY GOING TO BE LIKE HALF AN HOUR.

THEN WE WILL HAVE THE FORMAL COMMENT PERIOD. DURING THE FORMAL COMMENT PERIOD, E.P.A. WILL NOT BE ANSWERING TO THOSE COMMENTS TONIGHT. WE WILL ANSWER TO THOSE COMMENTS ON THE RESPONSIVENESS SUMMARY, WHICH IS ALSO A DOCUMENT THAT BECOMES A PART OF THE RECORD OF DECISION. ONCE AGAIN, WE WILL NOT ANSWER TO THOSE COMMENTS TONIGHT, SO IF YOU HAVE A QUESTION THAT YOU WANT AN ANSWER TONIGHT, YOU SHOULD ANSWER THAT -- YOU SHOULD ASK THAT QUESTION DURING THE QUESTION AND ANSWER SESSION, BUT IF YOU HAVE A COMMENT, A SUGGESTION OR A THOUGHT FOR US TO CONSIDER DURING -- DURING THIS COMMENT PERIOD FOR THE RECORD OF DECISION, PLEASE DO THAT DURING THE FORMAL COMMENT PERIOD.

WITH THAT, I WOULD LIKE TO TURN IT OVER TO DAN OPALSKI. THANK YOU

MR. OPALSKI: GOOD EVENING. I'M GOING TO TAKE JUST A COUPLE OF MINUTES, AS ANGELES SAID, TO TALK GENERALLY ABOUT THE SUPERFUND PROCESS TO BRING EVERYBODY UP TO SORT OF A COMMON LEVEL OF UNDERSTANDING ABOUT WHAT SUPERFUND IS ALL ABOUT. SUPERFUND IS THE WORD COMMONLY USED TO REFER TO THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT THAT WAS ORIGINALLY PASSED BY THE U.S. CONGRESS BACK IN 1980. UNDER SUPERFUND, E.P.A. HAS THE AUTHORITY AND THE RESPONSIBILITY TO RESPOND TO HAZARDOUS WASTE SITES AROUND THE COUNTRY. THESE SITES CAN FALL IN THE CATEGORY OF PLACES WHERE WE NEED TO RESPOND ON AN EMERGENCY BASIS, WHETHER THINGS LIKE SPILLS OR DANGEROUS AND IMMEDIATE THREATS TO HUMAN HEALTH; TWO: SITES WHERE THERE NEEDS TO BE SOME LONG-TERM EVALUATION, MUCH MORE LIKE THE CURRENT SITUATION AT THE FORMER WASTE DISPOSAL SITE. FOR THE SITES THAT GO THROUGH THIS LONGER TERM RESPONSE, WHAT WE TEND TO REFER TO AS A PIPELINE, THERE ARE THE STEPS THAT ARE PROVIDED HERE ON THIS OVERHEAD, AND I'LL GO THROUGH EACH OF THOSE REAL BRIEFLY.

FIRST STEP IS SITE DISCOVERY. THAT'S ESSENTIALLY THE WAY IN WHICH E.P.A. BECOMES AWARE OF THE SITE. THAT CAN HAPPEN BECAUSE A COMMUNITY MEMBER CALLS UP, IT CAN HAPPEN BECAUSE WE HEAR FROM A LOCAL FIRE DEPARTMENT, IT

COULD HAPPEN BECAUSE WE HEAR FROM A LOCAL OR COUNTY OR STATE ENVIRONMENTAL AGENCY. IN THE CASE OF WASTE DISPOSAL, BOTH THE CITY AND THE STATE WERE INVOLVED IN THIS SITE AND BROUGHT IT TO OUR ATTENTION. ONCE A SITE HAS BEEN BROUGHT TO OUR ATTENTION, THERE'S A PRELIMINARY AMOUNT OF DATA COLLECTION THAT GOES ON. THAT IS GEARED TOWARDS FINDING OUT ABOUT THE BACKGROUND OF THE SITE, FINDING OUT GENERALLY WHAT KINDS OF CHEMICALS ARE FOUND AT THE SITE AND GETTING A FIRST SENSE FOR HOW -- HOW HIGH THE CONCENTRATION OF THOSE CONTAMINANTS MIGHT BE IN THE AREA. ALL THAT IS PUT TO WORK IN THE -- WHAT IS SHOWN HERE AS THE N.P.L. RANKING OR LISTING. WHAT HAPPENS IS THERE'S A MODEL THAT IS USED TO DETERMINE WHETHER OR NOT THE CONDITIONS AT THE SITE MEET ENOUGH OF A THRESHOLD TO MAKE THAT SITE WORTHY OF THE EXPENDITURE OF OR ELIGIBLE FOR THE EXPENDITURE OF FEDERAL CLEANUP DOLLARS. THAT HAPPENED FOR THE W.D.I. SITE BACK IN JULY 1987 AS IT'S SHOWN HERE.

WE MOVE INTO A LONG STUDY PHASE. WE TRY IDEALLY TO BE LOOKING AT ABOUT AN 18 MONTH PERIOD DURING WHICH WE DO A REMEDIAL INVESTIGATION, FEASIBILITY STUDY. THAT PROCESS OBVIOUSLY HAS TAKEN LONGER HERE AT THE W.D.I. SITE, BUT WHAT THAT IS IS A PROCESS WHERE WE FIRST TRY TO CHARACTERIZE THE NATURE AND EXTENT OF THE CONTAMINATION. AGAIN, WE'RE TRYING TO DEFINE MORE DEFINITIVELY WHAT ARE WE SEEING OUT THERE, WHAT ARE THE CONCENTRATIONS, WHAT ARE THE

POTENTIAL PATHWAYS FOR EXPOSURE THAT TEND TO THREATEN OR MIGHT THREATEN PUBLIC HEALTH OR THE ENVIRONMENT. THAT'S IN THE REMEDIAL INVESTIGATION STAGE. DURING THE FEASIBILITY STUDY THEN, WE'RE LOOKING AT OKAY, WE'VE DEFINED THE PROBLEM, HOW CAN WE RESPOND TO IT, WHAT KINDS OF TECHNOLOGIES ARE APPROPRIATE FOR ADDRESSING THE KINDS OF CONDITIONS THAT WE'RE SEEING AT THE SITE. SO IN THE FEASIBILITY STUDY, WE TAKE THOSE TECHNOLOGIES, WE PUT THEM TOGETHER TO FORM REMEDIAL ALTERNATIVES, WE EVALUATE THOSE ALTERNATIVES AGAINST ONE ANOTHER, AND WE COME UP WITH A PREFERRED OR A PROPOSED REMEDY. WE -- WE PUBLISH THAT PREFERRED OR PROPOSED PLAN IN A FACT SHEET USUALLY LIKE THE ONE THAT YOU HAVE RECENTLY RECEIVED IN THE MAIL OR YOU'VE PICKED UP TONIGHT, AND THAT PUTS US INTO THE PUBLIC COMMENT PERIOD THAT YOU SHOW HERE -- THAT IS SHOWN HERE.

DURING THE PUBLIC COMMENT PERIOD, THE COMMUNITY HAS THE OPPORTUNITY TO LOOK AT THE FULL RECORD, NOT JUST THE PROPOSED PLAN AND THE REMEDIAL INVESTIGATION FEASIBILITY STUDY BUT ALL THE RECORDS THAT E.P.A. HAS PUT INTO AN ADMINISTRATIVE RECORD FILE TO FORM THE BASIS FOR MAKING A DECISION. A COPY OF THAT ADMINISTRATIVE RECORD FILE IS HERE IN THIS LIBRARY.

AFTER THE PUBLIC COMMENT PERIOD, WE ARE -- WE ARE REQUIRED TO CONSIDER ALL SIGNIFICANT COMMENTS, TO INCORPORATE THEM INTO A RESPONSIVENESS SUMMARY AND TO

DOCUMENT OUR FINAL DECISION IN THE RECORD OF DECISION. THAT RECORD OF DECISION, AGAIN, WOULD BE HERE IN THE LIBRARY AVAILABLE FOR EVERYONE'S REVIEW, AND THERE, AS ANGELES SAID EARLIER TONIGHT, YOU WOULD HAVE THE OPPORTUNITY TO LOOK AT THE RESPONSES TO THE OFFICIAL COMMENTS YOU MAKE, EITHER TONIGHT OR IN WRITING SUBMITTED TO OUR AGENCY.

AFTER THE RECORD OF DECISION, WE MOVE INTO A REMEDIAL DESIGN AND REMEDIAL ACTION STEP, WHICH IS -- WHICH IS, FIRST OF ALL, THE DRAWING OF THE TECHNICAL SPECIFICATIONS FOR THE ACTUAL WORK THAT WILL BE REQUIRED AND THEN THE ACTUAL CONSTRUCTION OR OTHER ACTIVITY THAT IS REQUIRED AT THE SITE TO SECURE IT TO MAKE SURE THAT THE REMEDY IS PROTECTIVE. OKAY? THAT IS SUPERFUND IN A REAL QUICK, GENERAL WAY. ACTUALLY, WE COULD TAKE A COUPLE OF QUESTIONS IF THERE'S ANYTHING THAT'S UNCLEAR AT THIS POINT OR WE CAN MOVE RIGHT INTO RUSTY'S PRESENTATION, BUT I WANT TO STOP FOR A SECOND IF THERE'S ANYTHING THAT IS UNCLEAR AT THIS POINT. OKAY?

RUSTY?

MR. HARRIS-BISHOP: THANKS, DAN.

OKAY. I'M RUSTY HARRIS-BISHOP, AS ANGELES SAID, AND I'M GOING TO BE PRESENTING THE ALTERNATIVES THAT E.P.A. HAS LOOKED AT, E.P.A.'S PROPOSED ALTERNATIVE AND ALSO SOME OF THE INVESTIGATIONS AND THE CONTAMINATION THAT WE FOUND

TO DATE AND A LITTLE BIT OF THE BACKGROUND OF THE SITE.

AND WHILE I'D LIKE TO PROBABLY WAIT FOR MOST OF THE QUESTIONS, YOU KNOW, AT THE END, IF I SAY SOMETHING THAT PEOPLE DON'T UNDERSTAND OR YOU'RE NOT FOLLOWING ME, PLEASE STOP ME, LET ME KNOW SO I CAN CLEAR IT UP, SO WE CAN, YOU KNOW, KEEP THE PRESENTATION MOVING SO EVERYONE CAN UNDERSTAND.

AS DAN SAID, THE SITE WAS INITIALLY PLACED ON THE N.P.L. IN 1987, AND WHEN WE PLACED IT ON, THIS IS THE BOUNDARY IS THIS DASHED LINE. IT WAS BASICALLY THE PROPERTY FROM SANTA FE SPRINGS ROAD TO GREENLEAF AVENUE AND LOS NIETOS ROAD TO THE EDGE OF THE FEDCO PROPERTY AND THE ST. PAUL'S HIGH SCHOOL PARKING LOT AND ATHLETIC FIELDS.

THE MAIN FOCUS OF THE DISPOSAL ACTIVITIES THAT WENT ON WHEN THE SITE WAS OPERATING WAS THIS CONCRETE DISPOSAL RESERVOIR, AND IT WAS ABOUT A 42 MILLION GALLON CONTAINER ORIGINALLY USED FOR STORING CRUDE OIL FROM THE WELL FIELDS AROUND HERE. AS THE WELL FIELDS STARTED TO PRODUCE LESS, IT WAS CONVERTED TO OR THEY STARTED USING IT FOR DRILLING MUDS AND SLUDGES FROM THE OIL FIELD INDUSTRY. DURING THE PROCESS OF OPERATING IT FROM ABOUT 1929 TO 1964, THEY OPERATED -- THEY ACCEPTED A LOT OF DIFFERENT KINDS OF WASTE, SLUDGES FROM INDUSTRIAL PROCESSES, CONSTRUCTION DEBRIS, CONCRETE. THEY ALSO DUG SOME PITS TO KIND OF SOLIDIFY ANY OF THE LIQUIDS OR SLUDGES THAT WERE IN THAT

RESERVOIR AND EVENTUALLY USED A LOT OF THIS AREA IN THIS BOUNDARY FOR DISPOSAL.

SO IT EVENTUALLY CLOSED IN THE EARLY '60'S, AND THEN THEY BROUGHT IN A LOT OF SOIL AND GRADED IT OVER TO BASICALLY ITS CURRENT CONFIGURATION THAT IT'S IN TODAY.

E.P.A. BECAME INVOLVED IN THE SITE IN 1986, '87, BUT THERE WERE SEVERAL INVESTIGATIONS PRIOR TO THAT THAT DID SOME CURSORY ENVIRONMENTAL INVESTIGATIONS AND ALSO SOME GEOTECHNICAL LIKE STRUCTURAL STUDIES TO SEE WHAT KIND OF BUILDINGS THE SITE COULD HOLD, THAT KIND OF THING, BUT MOSTLY E.P.A. RELIED ON THE DATA THAT WAS COLLECTED DURING THE REMEDIAL INVESTIGATION THAT WENT ON THROUGH '88 AND '89, AND THAT'S THE BASIS OF THE FEASIBILITY STUDY THAT WAS PUBLISHED IN AUGUST OF THIS YEAR.

WE STUDIED THREE DIFFERENT MEDIA. WE LOOKED AT GROUNDWATER CONTAMINATION, SOIL CONTAMINATION AND SUBSURFACE GAS CONTAMINATION. NOW, SUBSURFACE GAS CONTAMINATION IS BASICALLY THE METHANE THAT IS A PROBLEM THROUGHOUT THIS AREA BECAUSE OF THE OIL FIELD AND THE OIL THAT'S LOCATED HERE. AS IT DEGRADES, METHANE IS GENERATED, AND IT GENERALLY COMES TO THE SURFACE SLOWLY AND JUST EVAP -- JUST GOES OUT AND DISSIPATES INTO THE AIR. WE WANTED TO MAKE SURE WHAT WAS GOING ON DOWN THERE, SO WE DID THAT INVESTIGATION AS WELL. THE GROUNDWATER, WE DID ANOTHER INVESTIGATION. WE DID SOME MORE SAMPLING IN 1992

AT THE REQUEST OF THE STATE BECAUSE THEY FELT LIKE WE NEEDED TO DO SOME MORE CHARACTERIZATION, AND BASICALLY WE -- WE DIDN'T COME TO A CONCLUSION AS TO WHETHER THE SITE WAS CONTRIBUTING TO GROUNDWATER CONTAMINATION OR NOT CONTRIBUTING, SO WE'RE GOING TO BE LOOKING AT GROUNDWATER SEPARATELY, BUT I WANT TO STRESS RIGHT NOW THAT OUR INVESTIGATION SHOWED THAT THE SITE IS NOT CONTRIBUTING TO ANY DRINKING WATER CONTAMINATION BECAUSE THERE ARE SEVERAL LAYERS OF GROUNDWATER BEFORE ANY DRINKING WATER SOURCE THAT THE CITY OF SANTA FE SPRINGS USES, SO THERE'S NO DRINKING WATER THREAT, AND WE WANT TO MAKE SURE THAT THAT DOESN'T HAPPEN AT SOME TIME IN THE FUTURE.

I'LL TALK A LITTLE BIT ABOUT SOME OF THE SITE CONDITIONS TO DATE. I WANT TO PUT THIS PICTURE UP. THIS SHOWS SOME OF THE DOCUMENTED DISPOSAL AREAS THAT WE FOUND DURING THE INVESTIGATION, AND THESE ARE MOSTLY FROM AERIAL PHOTOGRAPHS. WE'RE LUCKY THAT WE HAVE PHOTOGRAPHIC RECORDS BACK TO, I THINK, 1928 OR 1937 ANYWAY THAT SHOW DIFFERENT DISPOSAL SITES THAT WERE OCCURRING DURING THIS TIME. SO THIS IS -- SO WE KIND OF LOOKED AT THIS AND THOUGHT WELL, YOU KNOW, IT LOOKS LIKE THEY USED THIS ENTIRE SITE FOR DISPOSAL, SO WE PUT A GRID DOWN AND BASICALLY DUG 100 HOLES DOWN TO THE GROUNDWATER AND SAMPLED THE SOIL EVERY FIVE FEET TO DETERMINE WHAT KIND OF CONTAMINATION WAS THERE. WE ALSO PUT IN 26 VAPOR WELLS TO SAMPLE THE GASES THAT ARE

DOWN IN THE GROUND AND 27 GROUNDWATER WELLS TO SAMPLE THE GROUNDWATER.

THE SOIL INVESTIGATION IS WHAT REALLY DROVE ANY -- WHAT DROVE THIS INVESTIGATION FURTHER BECAUSE MOST OF THE -- MOST CONTAMINATED MEDIA IS SOIL, AND MOST OF THE SOIL CONTAMINATION WE FOUND IS BELOW THE SURFACE BECAUSE THEY DID GRADE THIS OVER, AND THE CONTAMINATION OCCURRED OVER A LONG PERIOD OF TIME, SO MOST OF THE CONTAMINATION IS BELOW FIVE FEET. I ALSO WANT TO STRESS THAT MOST OF THE CONTAMINATION IS AT FAIRLY LOW LEVELS, AND, IN FACT, MOST IS WITHIN A LEVEL THAT E.P.A. COULD WALK AWAY FROM AND SAY IT'S WITHIN OUR ACCEPTABLE RISK RANGE. HOWEVER, THAT'S AT CURRENT EXPOSURE, AND RIGHT NOW THERE'S NO REAL THREAT TO HUMAN HEALTH, BUT IF THIS SITE IS SOMEHOW DEVELOPED AND PEOPLE START DIGGING AND GET DOWN INTO WHERE THE CONTAMINATION IS, YOU KNOW, AT 10 FEET UP TO 35 OR 40 FEET DOWN, THEN THERE'S A POTENTIAL RISK, AND SO THAT'S WHAT WE WANT TO ADDRESS IS ANY POTENTIAL RISK THAT COULD LEAD TO -- OR ANY POTENTIAL ACTIVITIES THAT COULD LEAD TO AN EXPOSURE DOWN THE ROAD, SO THAT'S BASICALLY WHERE THE THRUST OF OUR ACTIVITIES AND THAT'S WHERE THIS PREFERRED PLAN OR PROPOSED PLAN IS TRYING TO ADDRESS THAT RISK.

I WANT TO STRESS A LITTLE BIT, LIKE I SAID, ABOUT THE SUBSURFACE GAS AS IT SLOWLY COMES UP TO THE SURFACE, AND WE DIDN'T DETECT ANY OF THESE GASES AT THE SURFACE WHEN

WE WERE DOING OUR INVESTIGATION, BUT WE KNOW THAT IT'S DOWN THERE AT 65 FEET, AND WE KNOW THAT METHANE HAS A TENDENCY TO RISE. WE DID DETECT IT AT THE SURFACE, BUT WE'RE GOING TO BE DOING SOME MORE INVESTIGATIONS TO MAKE SURE THAT IT ISN'T COMING TO THE SURFACE BECAUSE IF IT IS, WE WOULD LIKE TO MITIGATE THAT BY PUMPING IT OUT THROUGH THE VAPOR WELLS WE ALREADY HAVE IN PLACE AND THEN FLARING IT, MUCH LIKE A LANDFILL FLARE OR A FLARE THAT YOU SEE IN THE OIL WELLS WHERE THEY BURN THE METHANE AS THAT'S COMING OUT, SO THAT'S A COMPONENT OF OUR REMEDY, IF NECESSARY.

AND WE FOUND GROUNDWATER CONTAMINATION, BUT LIKE I SAID, WE'RE GOING TO BE ADDRESSING THAT SEPARATELY BECAUSE WE NEED TO FIND SOME MORE DATA, AND WE ARE LOOKING FORWARD TO WORKING WITH THE CITY AS WELL AS THE STATE REGIONAL WATER QUALITY CONTROL BOARDS AND THE STATE DEPARTMENT OF TOXIC SUBSTANCES CONTROL TO GET A LARGER PICTURE OF THE CONDITIONS OF GROUNDWATER, ESPECIALLY AT SHALLOW LEVELS, WHICH IS NOT NORMALLY WHAT PEOPLE STUDY BECAUSE PEOPLE LOOK AT THE DRINKING WATER SUPPLY, WHICH IS MUCH DEEPER. WE WANT TO -- WE NEED TO LOOK AT THE SHALLOW GROUNDWATER, WHICH IS WHAT THE SITE WOULD IMPACT, SO WE'RE GOING TO BE DOING SOME MORE INVESTIGATIONS INTO THAT AREA AND LOOKING AT A BROADER PICTURE, HOPEFULLY IN OCTOBER/NOVEMBER TIME FRAME, EVERYONE GETTING TOGETHER.

AT THIS POINT, I'D LIKE TO TALK A LITTLE BIT

ABOUT OUR ALTERNATIVES THAT WE REVIEWED THAT ARE IN THE FEASIBILITY STUDY. IN THE FEASIBILITY STUDY WE LOOK AT A LOT OF DIFFERENT THINGS, DIFFERENT TECHNOLOGIES THAT WE COULD USE AND DIFFERENT TREATMENT OPTIONS. ONE OF THE PROBLEMS AT THIS SITE IS WE HAVE A VARIETY OF CONTAMINANTS THAT NO ONE TECHNOLOGY IS USUALLY COMPATIBLE WITH MULTI -- MULTIPLE CONTAMINATION UNLESS THEY'RE ALL SIMILAR, SO WE DID LOOK AT A LOT OF TECHNOLOGIES AND THEN SCREEN THEM OUT BECAUSE THEY WEREN'T PRACTICAL, AND THE SEVEN THAT WERE PRESENTED IN THE FEASIBILITY STUDY OR IN THE PROPOSED PLAN ARE ALSO UP HERE (INDICATING), AND FIRST I'D LIKE TO GO THROUGH E.P.A.'S PREFERRED ALTERNATIVE, BUT I WANT TO STRESS THAT ALL OF THESE ALTERNATIVES ARE, YOU KNOW, UP FOR COMMENT BASICALLY, AND NONE OF THEM ARE REALLY SET IN STONE. I MEAN IF THERE'S A COMPONENT THAT YOU FEEL REALLY STRONGLY ABOUT THAT WE SHOULD EMPLOY IN OUR PREFERRED ALTERNATIVE, WE NEED TO KNOW THAT, AND THESE ARE ALL, YOU KNOW -- WE CAN KIND OF CONTOUR THE REMEDY TO MAKE SURE THAT IT'S PROTECTIVE, WHICH IS OUR FIRST GOAL, AND ALSO THAT IT HAS COMMUNITY ACCEPTANCE, WHICH IS ONE OF THE CRITERIA THAT WE NEED TO USE.

OUR FIRST GOAL THOUGH IS MAKE SURE WE PREVENT ANY EXPOSURE AND PREVENT ANY FURTHER EXPOSURE, AND THEN THE OTHER ALTERNATIVES -- THE CRITERIA THAT WE LOOK AT INCLUDE COMMUNITY ACCEPTANCE, SO OUR PROPOSED AL -- OUR PREFERRED

ALTERNATIVE IS ALTERNATIVE 3C, WHICH IS LISTED IN THE FACT SHEET AND ALSO IN THE FEASIBILITY STUDY. I'M GOING TO THROW UP THAT SCHEMATIC RIGHT HERE. BASICALLY THERE'S FOUR COMPONENTS TO IT. THE FIRST ONE IS LIMITED EXCAVATION, AND WHAT WE WANT TO DO HERE IS IN THESE RED AREAS, THAT'S AREAS WHERE IT'S BASICALLY AN UNDEVELOPED PROPERTY SO THAT THE CONTAMINATION THAT'S IN THE SOIL UNDER THE GROUND -- UNDER THE SURFACE IS EASIER TO GET TO, AND SO WHAT WE'D LIKE TO DO IS EXCAVATE THAT SOIL AND CONSOLIDATE IT OVER HERE IN THIS MIDDLE ABOVE WHERE THE RESERVOIR IS TO FREE UP THIS PROPERTY (INDICATING) FOR UNRESTRICTED DEVELOPMENT.

THE SECOND COMPONENT IS AN INSTITUTIONAL CONTROL, WHICH IS KIND OF A FANCY PHRASE FOR ANY NUMBER OF THINGS, INCLUDING DEED RESTRICTION, NOTICES ON THE DEED THAT JUST LET PEOPLE KNOW WHAT IS AT THE SITE ALL THE WAY TO SOME KIND OF ZONING RESTRICTION OR A DESIGNATION BY THE STATE THAT THIS IS A HAZARDOUS PROPERTY WITH LIMITED USE. WE'LL BE WORKING WITH THE PROPERTY OWNERS AND THE CITY AS WELL AS THE STATE TO DETERMINE WHAT EXACTLY NEEDS TO BE DONE ON EACH PARCEL AROUND HERE WHERE WE FOUND CONTAMINATION (INDICATING) AS WELL AS THIS CENTRAL AREA THAT WE'RE GOING TO BE PAVING, WHICH IS THE THIRD COMPONENT OF THE ALTERNATIVE, TO MAKE SURE THAT WE ARE BEING PROTECTIVE BUT ALSO NOT BEING TOO RESTRICTIVE IN ALLOWING SOME USE. SINCE WE'VE DONE A PRETTY THOROUGH INVESTIGATION ON EACH PARCEL,

WE CAN TELL WHAT IS UNDERNEATH EACH PARCEL, SO WE CAN LET PEOPLE KNOW WHAT THE RISKS ARE. IF THE RISKS ARE AT 25 FEET, WE CAN PRETTY MUCH ALLOW, YOU KNOW, USE OF 20 FEET OF THE PROPERTY, AND SO MOST OF THE PROPERTY IS ALREADY DEVELOPED AROUND HERE. WE WILL NOT BE DOING ANY -- WE WON'T BE IMPACTING THE CURRENT BUSINESSES THAT WE HAVE THAT ARE ON THE SITE.

THE THIRD COMPONENT IS THIS GREEN HATCHED AREA, WHICH IS WHAT WE CALL THE R.C.R.A. CAP. R.C.R.A. IS THE RESOURCE, CONSERVATION AND RECOVERY ACT, WHICH IS A FEDERAL LAW THAT REGULATES HAZARDOUS WASTE SITES, HAZARDOUS WASTE GENERATORS AND HAZARDOUS MATERIALS, AND SO WHILE IT DOESN'T DIRECTLY APPLY TO THE SITE BECAUSE THIS WASN'T REALLY A MUNICIPAL LANDFILL AND IT WASN'T A HAZARDOUS WASTE LANDFILL, THEY ADDRESS A LOT OF THE SAME CONCERNS THAT WE HAVE HERE, WHICH IS CONTACT WITH THE EXPOSURE -- CONTACT WITH THE CONTAMINATION, WHICH LEADS TO EXPOSURE AND PREVENTION OF GROUNDWATER CONTAMINATION. WHAT CAN HAPPEN IN SOME INSTANCES IS IF YOU HAVE SOIL THAT'S CONTAMINATED, YOU HAVE RAINWATER HIT THE GROUND, AND IT FLUSHES THROUGH, YOU KNOW, THAT'S HOW WATER GETS INTO THE GROUND, AND IT FLUSHES THE CONTAMINATION THROUGH AND CAN LEAD TO GROUNDWATER CONTAMINATION. SO WE WANT TO PREVENT THAT FROM HAPPENING BY PUTTING A PHYSICAL BARRIER HERE, WHICH IS ASPHALT, AND UNDERNEATH IT A THIN PLASTIC LAYER, WHICH IS,

YOU KNOW, PRETTY TOUGH TO POKE A HOLE THROUGH IT SO THAT WE HAVE TWO LAYERS THAT WATER CAN'T GET THROUGH, AND WATER WILL BE SHEDDED OFF TO THE SIDES HERE (INDICATING). THAT WOULD PREVENT GROUNDWATER FROM BECOMING CONTAMINATED BY SOME RAINWATER FLUSHING THROUGH, AND IT WILL ALSO PROVIDE A PHYSICAL BARRIER TO PEOPLE SO THAT THEY WON'T -- IT MAKES IT MORE DIFFICULT TO DIG A HOLE THROUGH, YOU KNOW, SIX INCHES OF ASPHALT THAN IF WE WERE JUST TO LEAVE IT AS PLAIN SOIL.

THEN THE FOURTH COMPONENT, AS I SAID BEFORE, IS A GAS TREATMENT AND FLARING SYSTEM IF THAT BECOMES NECESSARY. WE'VE GOT SEVERAL VAPOR WELLS THROUGHOUT THE SITE, SO IF WE DO NEED TO EMPLOY SOME KIND OF GAS COLLECTION AND TREATMENT SYSTEM, WE'VE GOT A LOT OF THE APPARATUS ALREADY THERE, BUT WE'LL BE DOING MORE INVESTIGATIONS INTO THAT AREA DURING DESIGN TO MAKE SURE THAT'S NECESSARY, AND THEN WE'LL BE MONITORING EVERY YEAR TO MAKE SURE THAT OUR REMEDY IS BEING PROTECTIVE AND THAT GROUNDWATER IS NOT BECOMING MORE CONTAMINATED AND THAT GAS IS NOT MIGRATING FROM UNDERNEATH THIS CAP AND COMING OUT, YOU KNOW, THE SIDES, SO WE'LL BE MONITORING EVERY YEAR AND THEN EVALUATING OUR REMEDY AT LEAST EVERY FIVE YEARS, WHICH IS BY STATUTE WE HAVE TO LOOK AT EVERY FIVE YEARS OUR REMEDY TO MAKE SURE IT'S PROTECTIVE BECAUSE WE ARE LEAVING WASTES IN PLACE HERE.

OKAY. LET ME GO BACK THROUGH -- OH, I'LL JUST SHOW YOU THIS REAL QUICK. THIS IS THE R.C.R.A. CAP, WHICH IS KIND OF A SCHEMATIC OF WHAT WE HOPE THAT OUR CAP WOULD LOOK LIKE. BASICALLY WE'VE GOT THE WASTE MATERIAL DOWN HERE (INDICATING), AND WE'VE GOT FIVE FEET OF ALREADY SOIL COVERING. WHAT WE WOULD DO IS THIS WOULD BE THE CONSOLIDATED MATERIAL WE'D EXCAVATE FROM THE OTHER AREAS OF THE SITE, AND THEN WE'D HAVE THE FLEXIBLE MEMBRANE LAYER OVER THE WHOLE THING AND THEN SIX INCHES OF ASPHALT OVER THE TOP OF THAT.

OKAY. I WANT TO TALK A LITTLE BIT ABOUT THE OTHER ALTERNATIVES WE LOOKED AT, AND THEY'RE ALSO EXPLAINED IN THE FACT SHEET. THE FIRST ONE, THE NO ACTION ALTERNATIVE, WE ARE REQUIRED BY LAW TO LOOK AT AS KIND OF A BASELINE FOR IF WE JUST WALKED AWAY FROM THE SITE, WHAT WOULD THE RISKS BE, WHAT WOULD THE COSTS BE, AND THEN WE USE THAT AS A COMPARISON.

WE WOULD -- INCLUDED IN THAT NO ACTION ALTERNATIVE IS SAMPLING. WE WOULD HAVE TO CONTINUE TO SAMPLE THE GROUNDWATER IN THE SOIL AND THE VAPOR BECAUSE OF THE WASTES LEFT IN PLACE. ALTERNATIVE TWO IS FENCING, REVEGETATION AND INSTITUTIONAL CONTROLS. THAT'S PRETTY SELF-EXPLANATORY. WE'D AUGMENT THE FENCES WE HAVE CURRENTLY AROUND THE SITE TO MAKE IT TALLER AND LESS ACCESSIBLE WITH BARBED WIRE OR RAZOR WIRE, REVEGETATE THE

AREAS THAT WE DUG AND PUT THE WELLS IN TO MAKE SURE WE HAVE NOT ANY BARE SPOTS THAT WE CREATED AND THEN JUST PUT THOSE INSTITUTIONAL CONTROLS IN. THEY WOULD BE DIFFERENT FROM THE ALTERNATIVES DOWN HERE BECAUSE WE WOULDN'T HAVE ALLOWED ANY USE OF THAT CENTRAL PROPERTY BECAUSE WE HADN'T DONE ANYTHING TO IT, SO WE'D WANT TO MAKE SURE THAT IT DOESN'T -- IT WON'T BE DISTURBED. WE'D HAVE SIMILAR CONTROLS THAT WE WOULD HAVE FOR THE OTHER ALTERNATIVES AROUND THOSE BUSINESS PROPERTIES, YOU KNOW, THESE -- THESE PROPERTIES HERE (INDICATING). WE'D BASICALLY BE FENCING THIS WHOLE AREA AROUND HERE AND THEN PREVENTING ANY FUTURE USE.

ALTERNATIVE THREE IS BASICALLY THE CONTAINMENT OPTIONS, AND WE DIVIDED THEM INTO FOUR DIFFERENT CONTAINMENT OPTIONS AND DEGREES OF COMPLEXITY. THE FIRST ALTERNATIVE IS A MULTI-LAYER SOIL CAP. IT BASICALLY WOULD BE AN AUGMENTATION OF WHAT WE ALREADY HAVE. WE'VE GOT FIVE FEET OF SOIL COVERING THE CONTAMINATION. WE WOULD PUT AN ADDITIONAL CLAY LAYER DOWN TO MAKE IT LESS PERMEABLE TO WATER, AND THEN WE'D PUT DOWN TWO FEET OF TOP SOIL SO THAT THEN PLANTS AND SHRUBS COULD GROW THERE, AND THEY WOULD HAVE TO BE MAINTAINED LIKE A -- LIKE A REGULAR LAWN, AND THAT WOULD BE OVER THE ENTIRE AREA THAT'S EXPOSED RIGHT NOW, WHICH WOULD BE THIS WHOLE AREA (INDICATING) AND NOT -- NOT JUST THIS SQUARE BUT ALSO THESE PARCELS HERE

(INDICATING).

ALTERNATIVE 3B COVERS THAT SAME AREA, ANY AREA OF THE SITE THAT IS UNDEVELOPED, AND IT HAS POTENTIAL FOR EXPOSURE BECAUSE IT'S LESS -- YOU KNOW, THERE'S LESS PHYSICAL BARRIER THERE. MOST OF THE SITE IS COVERED WITH CONCRETE OR PAVEMENT OR BUILDINGS, SO WE DON'T NEED TO ADD ANYTHING TO THAT BECAUSE THAT'S A PRETTY EFFECTIVE BARRIER, BUT IN THE AREAS THAT ARE UNDEVELOPED, WE'D PUT JUST A SIMPLE ASPHALT CAP, BASICALLY KIND OF LIKE A PARKING LOT.

THE THIRD ALTERNATIVE, WHICH I EXPLAINED IS E.P.A.'S PREFERRED ALTERNATIVE, IS THE ASPHALT CAP WITH AN ADDITIONAL PLASTIC LAYER UNDERNEATH IT AS AN ADDED PROTECTION LAYER FOR GROUNDWATER INFILTRATION AND A BARRIER FOR, YOU KNOW, CONTACT AND EXPOSURE.

THE FOURTH ONE IS BASICALLY MORE LAYERS THAN 3C. A FULL R.C.R.A. CAP AND THE GUIDELINES FOR CLOSING A MUNICIPAL LANDFILL, THERE ARE JUST SOME ADDITIONAL LAYERS OF STONES, COBBLES, THAT KIND OF THING THAT ARE ALSO REQUIRED. IT MAKES THE CAP ABOUT FIVE FEET THICK, AND WITHOUT ANY REAL ADDITIONAL BARRIERS TO RAINWATER INFILTRATION, WE FEEL THAT WE NEED THE REQUIREMENTS WHICH ARE TO BE PROTECTIVE OF GROUNDWATER AND PROTECTIVE OF HUMAN HEALTH BY EXPOSURE BY THE MORE SIMPLE ASPHALT THAN THE PLASTIC LINER.

MR. SHARP: QUESTION? ON THE PREVIOUS SLIDE YOU

SHOWED THE AREA FENCED. IF I'M UNDERSTANDING THE PRESENTATION, THE RED AREAS WILL BE EXCAVATED. THAT MATERIAL WILL BE MOVED INTO THE GREEN AREA, THEN THE ENTIRE AREA WILL CONTINUE TO BE FENCED, AND THE ENTIRE AREA WILL BE COATED WITH AN ASPHALT LAYER?

MR. HARRIS-BISHOP: YES. WITH OUR --

MR. SHARP: ALL THE ENTIRE SURFACE AREA WITHIN THE FENCE?

MR. HARRIS-BISHOP: YEAH, THE AREA WITHIN HERE (INDICATING). WE DON'T ACTUALLY -- WE WOULD NOT REQUIRE A FENCE ALONG THIS BORDER. WE'VE GOT A FENCE ALREADY ALONG HERE (INDICATING).

MR. SHARP: SO THE FENCE WOULD REMAIN ON THE OUTSIDE PERIMETER OF THE ENTIRE PROPERTY. INSIDE THE FENCE IT WOULD BE ASPHALTED.

MR. HARRIS-BISHOP: YEAH. ACTUALLY THOUGH -- I MEAN THE ISSUE OF A FENCE IS SOMETHING THAT CAN BE DEALT WITH LATER. THAT WOULD PROBABLY BE MORE OF A PROPERTY OWNER'S DECISION BECAUSE WITH THIS CAP, WE WOULD BE PROTECTIVE, SO WE WOULDN'T NECESSARILY NEED THE FENCE TO BE THERE TO ADD THAT EXTRA LAYER OF PROTECTION BECAUSE WE'VE ALREADY EXCAVATED THE CONTAMINATED SOIL FROM HERE. PROBABLY A FENCE WOULD BE A GOOD IDEA JUST TO KEEP PEOPLE FROM BEING ON THE PROPERTY, YOU KNOW, SKATEBOARDERS OR WHATEVER, SINCE IT MAY BE AN ATTRACTIVE SKATEBOARDING AREA IF IT'S A NICE,

SMOOTH ASPHALT SURFACE.

MR. SHARP: QUESTION. IF THE GREEN AREA IS THE AREA THAT YOU'RE CONCERNED WITH, WHY WOULD NOT THE FENCE BE MOVED BACK TO THE GREEN AREA SO ALL THE WHITE AREA, WHICH HAD BEEN EXCAVATED AND THE IMPURITIES REMOVED FROM THE SOIL, BE ABLE TO BE OPEN FOR DEVELOPMENT?

MR. OPALSKI: PULL UP THE OTHER SLIDE BECAUSE WHAT YOU NEED TO CLARIFY IS SOME OF THE ALTERNATIVES CALL FOR THAT EXCAVATION AND OTHERS DO NOT.

MR. HARRIS-BISHOP: THIS ONE (INDICATING)?

MR. SHARP: I THINK WE'RE ONLY DEALING WITH 3C, AND THAT'S YOUR PREFERRED, SO I THINK --

MR. HARRIS-BISHOP: I WANTED TO EXPLAIN ALL THE ALTERNATIVES THOUGH SO THAT EVERYONE KNOWS THAT ALL THOSE ALTERNATIVES ARE STILL, YOU KNOW, DEBATABLE. WE CAN DISCUSS THOSE, AND THEY'RE ALL UP FOR DISCUSSION.

THE REPORTER: WOULD YOU IDENTIFY YOURSELF, PLEASE?

MR. SHARP: BEG YOUR PARDON?

THE REPORTER: WOULD YOU IDENTIFY YOURSELF?

MR. SHARP: MY NAME'S ALBERT SHARP, S-H-A-R-P.

MR. HARRIS-BISHOP: SO YEAH, WE'D BE EXCAVATING THESE RED AREAS SO THAT THEY COULD UNDERGO SOME FUTURE DEVELOPMENT. IF THE OWNER OF THE PROPERTY WANTS THAT TO BE FENCED, I MEAN THAT WOULD BE THEIR DECISION, BUT THE FENCING THAT WE HAVE CURRENTLY IS TO PREVENT PEOPLE FROM

COMING ONTO THE SITE. WITH OUR CAP, WE WOULD BE PROTECTIVE, SO WE WOULDN'T NEED THAT EXTRA LAYER OF PROTECTION, WHICH IS BASICALLY A FENCE.

MARILYN, DO YOU HAVE A --

MS. UNDERWOOD: SO JUST TO CLARIFY, YOU'RE NOT PROPOSING TO PAVE THE AREA THAT WAS EXCAVATED.

MR. HARRIS-BISHOP: NO. BECAUSE THEN THAT WILL BE OPEN TO FUTURE DEVELOPMENT BECAUSE WE WOULD BE REMOVING THE RISK THAT WAS PROPOSED WITH DEVELOPMENT BECAUSE WITH DEVELOPMENT THERE WOULD BE A FOUNDATION, WHATEVER. YOU'D HAVE TO GET DOWN AND POTENTIALLY BE EXPOSED. WE'D BE REMOVING THAT RISK.

MR. SHARP: WOULD YOU CLARIFY THAT THEN ONCE AGAIN BECAUSE I ASKED A QUESTION, AND YOU SAID IT WOULD BE PAVED. SHE ASKED THE SAME QUESTION; YOU SAID IT WOULDN'T BE. INSIDE THE EXISTING FENCED AREA, ONLY THE GREEN AREA NOW OUTLINED WILL BE PAVED.

MR. HARRIS-BISHOP: YES.

MR. SHARP: ALL THE REST WILL BE DEVELOPABLE WITH DIRT, WITH ALL THE FOUNDATIONS AND THOSE CONSEQUENCES AMD EVERYTHING REMOVED.

MR. OPALSKI: RUSTY, LET ME CLARIFY. AGAIN, I WANT TO CLARIFY THERE HASN'T BEEN A DECISION MADE, SO WE HAVE TO BE REAL PRECISE HOW WE'RE ASKING THAT QUESTION. UNDER 3C, E.P.A.'S PREFERRED ALTERNATIVE, WHAT YOU STATE IS TRUE.

ONLY THE AREA THAT'S IN THE GREEN HATCH WOULD BE PAVED, OKAY? UNDER SOME OF THE OTHER ALTERNATIVES, INCLUDING THE ALTERNATIVE RUSTY DISCUSSED, IT WAS JUST THE FENCING WITH INSTITUTIONAL CONTROLS. THERE WOULDN'T BE ANY EXCAVATION IN THOSE AREAS, AND, THEREFORE, FOR PROTECTIVENESS THE FENCING WOULD BE EXPANDED TO INCLUDE THE AREAS THAT ARE IN RED BECAUSE UNDER THAT ALTERNATIVE, THERE WOULDN'T BE THE EXCAVATION.

MR. HARRIS-BISHOP: SO NONE OF THAT LAND WOULD BE FREED UP FOR DEVELOPMENT BECAUSE CONTAMINATION STILL EXISTS AND THE RISK FOR EXPOSURE WOULD STILL EXIST.

MR. OPALSKI: IS THAT CLEAR THOUGH? I WANT TO MAKE SURE.

MR. SHARP: NO, IT HASN'T CHANGED ANY SINCE 1984.

MR. OPALSKI: NO, I WANT TO MAKE SURE WE'RE CLEAR BEFORE WE MOVE ON BECAUSE IT'S AN IMPORTANT QUESTION. THE DIFFERENCE IS THAT WE'RE ANSWERING -- I GUESS THE POINT IS THE ANSWER TO THE QUESTION IS DIFFERENT DEPENDING ON WHICH ONE OF THESE ALTERNATIVES YOU'RE ASKING ABOUT. UNDER E.P.A.'S PREFERRED ALTERNATIVE, THE EXCAVATION IN THE RED AREA OCCURS, THE EXCAVATED MATERIAL GETS MOVED TO THE AREA WHERE THE CONCRETE SUMP IS, AND A CAP IS PUT OVER THAT AREA. THE CAP DOES NOT EXTEND TO AREAS WHERE THE EXCAVATION'S OCCURRED, SO THAT'S UNDER THE E.P.A.'S PREFERRED ALTERNATIVE, THE ONE THAT'S PRESENTED AS

ALTERNATIVE 3C.

MR. SHARP: UNDER YOUR PREFERRED, ALL THE WHITE LAND AND THE LAND NOW IN RED WOULD BE FREE FOR COMMERCIAL DEVELOPMENT?

MR. OPALSKI: THAT'S CORRECT.

MR. SHARP: WITH THE TILT-UP BUILDINGS OR WHATEVER THE PROPERTY OWNER WISHED TO PUT IN THAT AREA.

MR. HARRIS-BISHOP: WITH THE INSTITUTIONAL CONTROLS THAT WOULD BE REQUIRED FOR THE PROPERTIES THAT STILL HAVE CONTAMINATION UNDERNEATH THEM. WE'RE ONLY EXCAVATING THE UNDEVELOPED AREAS BECAUSE WE CAN GET TO THEM WITHOUT IMPACTING THE BUSINESSES. THERE'S STILL SOME UNDERLYING CONTAMINATION IN THESE PARCELS THAT ALREADY HAVE BUILDINGS AND PARKING LOTS THAT WE WOULD HAVE TO DO SOME KIND OF RESTRICTION, EITHER A DEED NOTICE JUST SAYING THAT THERE IS CONTAMINATION UNDER THESE PROPERTIES AND WHAT THAT CONTAMINATION IS OR A ZONING RESTRICTION SAYING WHAT CAN AND CAN'T BE DONE TO THE PROPERTY AND PERHAPS GO AS FAR AS, IF WE CAN'T WORK THAT OUT, HAVING THE STATE DESIGNATE IT AS A HAZARDOUS WASTE PROPERTY, WHICH HAS ITS OWN SUBSEQUENT RESTRICTIONS ON USE. WE CAN'T REALLY -- E.P.A. CAN SAY WE'D RATHER NOT HAVE ANYONE DIG UNDER ANY OF THESE PROPERTIES WHERE WE HAVEN'T REMOVED THE MATERIAL, BUT WE CAN'T PREVENT ANYONE FROM GOING OUT THERE AND DIGGING ON THEIR OWN PROPERTY. WHAT WE'D LIKE TO DO THOUGH IS

MITIGATE ANY CHANCE OF EXPOSURE BY LETTING PEOPLE KNOW AND LETTING SUBSEQUENT OWNERS KNOW THAT THERE IS CONTAMINATION THERE AND WHAT THE RISKS ARE THAT ARE POSED BY DOING THESE ACTIVITIES. THE CURRENT ACTIVITIES AT THE SITE DON'T POSE ANY RISK FROM -- YOU KNOW, THEY DON'T POSE ANY EXPOSURE TO THE CONTAMINATION. WHAT WE WANT TO PREVENT IS ANY FUTURE EXPOSURE BY DIGGING OR SOMETHING AND LETTING PEOPLE KNOW WHAT IS UNDER THERE, AND THAT'S WHAT THOSE INSTITUTIONAL CONTROLS WOULD BE FOR ON THE SURROUNDING PROPERTIES. WE HAVE INSTITUTIONAL CONTROLS ON THIS PAVED AREA ALSO BECAUSE WE WANT TO MAKE SURE THAT WHATEVER IS DONE ON THAT PROPERTY, THE FIRST GOAL, WHICH IS TO BE PROTECTIVE, IS MAINTAINED BY KEEPING THAT CAP, YOU KNOW, THE INTEGRITY OF THAT CAP MAINTAINED BY NOT PUTTING SOMETHING ON THERE THAT'S GOING TO CRUSH IT OR CRACK IT OR, YOU KNOW, SPLIT IT OPEN, SO THERE -- THERE CAN BE SOME LIMITED USES FOR THE PROPERTY, BUT WE WANT TO MAKE SURE THAT WE ARE BEING PROTECTIVE.

MS. HERRERA: RUSTY, WE HAVE A QUESTION.

MR. HARRIS-BISHOP: FATHER GALLAGHER?

FATHER GALLAGHER: MY NAME IS GALLAGHER, AND WHAT I'M INTERESTED IS IN KNOWING: IS THAT THE ONLY PURPOSE OF THAT CAP IS TO PREVENT RAINWATER FROM PASSING THROUGH THE TOP LEVEL OF SOIL AND THEN TAKING WHATEVER ELEMENTS ARE BELOW THERE TO A DEEPER LEVEL WHERE THE GROUNDWATER WOULD BE

AFFECTED; IS THAT CORRECT?

MR. HARRIS-BISHOP: THAT'S ONE OF THE PURPOSES. THE OTHER PURPOSE IS TO MAKE -- PROVIDE ANOTHER PHYSICAL BARRIER TO THE CONTAMINATION AND ALSO TO ALLOW SOME LIMITED USE OF THE PROPERTY.

FATHER GALLAGHER: IF THERE IS ALREADY FIVE FEET OF UNCONTAMINATED SOIL THERE, IS E.P.A. NOT CONVINCED THAT THE CITY OF SANTA FE SPRINGS KEEPS GOOD ENOUGH RECORDS OF WHAT IS GOING ON ON THEIR PROPERTIES THAT THEY WOULD NEVER USE THAT PROPERTY, FOR EXAMPLE, TO BUILD A 50-STORY BUILDING OR SOMETHING LIKE THAT?

MR. HARRIS-BISHOP: NO. I MEAN THAT'S -- IF WE WERE -- IF WE WEREN'T GOING TO PUT THIS PAVEMENT HERE, THEN WE WOULD HAVE THAT RESTRICTION IN PLACE, THAT, YOU KNOW, WHAT COULD AND COULDN'T BE DONE ON THE PROPERTY BECAUSE WE DON'T WANT TO HAVE ANY POTENTIAL -- AFTER WE'RE ALL GONE, WITHIN 100 YEARS FROM NOW, WE'D HOPE THAT THOSE RESTRICTIONS WOULD STILL BE IN PLACE.

FATHER GALLAGHER: SO AGAIN, MY QUESTION OR MY COMMENT WOULD BE THAT -- THAT ANY KIND OF ACTIVITY THAT'S GOING ON ON THAT PROPERTY RIGHT NOW IS REALLY -- THERE'S ABSOLUTELY NO PROBLEM ABOUT THE SAFETY OF THAT PROPERTY.

MR. HARRIS-BISHOP: NO.

FATHER GALLAGHER: IN OTHER WORDS, JUST THE FENCE IS PROTECTIVE.

MR. HARRIS-BISHOP: YEAH. AND WE JUST WANT TO MAKE SURE THAT THAT CONTINUES TO BE, AND A FENCE IS A LIMITED PROTECTION MEASUREMENT. I MEAN, AS YOU KNOW, THAT FENCE HAS BEEN CLIMBED OVER AND STEPPED ON, AND I THINK EVEN A SECTION HAS BEEN, I THINK, REMOVED, SO A FENCE IS ONLY -- IS A SHORT-TERM ALTERNATIVE. WITH AN ASPHALT CAP, WE FEEL THAT HE HAVE A LONG-TERM PROTECTIVE MEASURE. LIKE WE LOOKED AT THESE OTHER ALTERNATIVES. YOU KNOW, THERE ARE PROS AND CONS WITH ALL OF THESE ALTERNATIVES. THIS ONE WE FEEL MEETS ALL OF OUR REQUIREMENTS AND OUR GOALS, WHICH IS TO BE PROTECTIVE AND PREVENT LONG-TERM EXPOSURE.

THE CURRENT CONFIGURATION AS IT IS NOW IS MODERATELY PROTECTIVE, BUT IN THE LONG-TERM, WE CAN'T ENSURE THAT, YOU KNOW, SOMEONE ISN'T GOING TO GO OUT THERE AND -- AND BECOME EXPOSED INADVERTENTLY TO THAT DEPENDING ON THE DEVELOPMENT SO --

FATHER GALLAGHER: BUT IN ORDER TO BE EXPOSED TO THAT, THEY WOULD HAVE TO DIG 25 FEET BELOW GROUND?

MR. HARRIS-BISHOP: WELL, THEY'D HAVE TO DIG AT LEAST FIVE FEET TO COME IN CONTACT WITH ANY CONTAMINATION, AND MOST OF THE CONTAMINATION IN THIS AREA IS, IN FACT, AT 10 TO 15 FEET.

FATHER GALLAGHER: BUT THAT WILL ALREADY BE RESTRICTED BY CITY ORDINANCE.

MR. HARRIS-BISHOP: CITY ORDINANCE OR A RESTRICTION ON

THE DEED, NOTICE ON THE DEED.

YES, MA'AM.

MS. HERRERA: EXCUSE ME. WOULD YOU STATE YOUR NAME?

MS. CABRAL: YOU'RE SAYING YOU'RE GOING TO PUT A CAP ON THAT GREEN AREA, AND I KNOW RIGHT THERE WITH THE BASEBALL FIELD AND ST. PAUL, IT'S NOT FLAT.

MR. HARRIS-BISHOP: IT'S ACTUALLY -- IT KIND OF SLOPES DOWN THROUGH HERE (INDICATING).

MS. CABRAL: IT'S ABOUT TEN FEET HIGH.

MR. HARRIS-BISHOP: WE CAN ACTUALLY MAKE --

MS. CABRAL: THAT'S GOING TO BE GOING DOWN TO THE GROUND.

MR. CABRAL: MY NAME IS LOUIS CABRAL. ON THAT SITE THERE, ARE THEY GOING TO JUST PUT IT ON TOP AND NOT ON THE SIDE?

MR. HARRIS-BISHOP: NO. IT'S GOING TO GO ALL THE WAY TO THE PROPERTY LINE, WHICH IS DOWN AT THE BOTTOM OF THAT SLOPE, BECAUSE WE NEED TO MAKE SURE THAT WE HAVE A UNIFORM DRAINAGE, SO WE WOULD HAVE A SLOPE, AN ASPHALT SLOPE, ALL THE WAY DOWN HERE (INDICATING) AND THEN SOME KIND OF DRAINAGE TO TAKE THAT WATER FROM THE RAINWATER THAT RUNS OFF TO THE STORM DRAIN.

MR. CABRAL: ALL WHAT YOU'RE DOING IS TALKING ABOUT COVERING EVERYTHING UP.

MR. HARRIS-BISHOP: YES, WITH SOIL.

MR. CABRAL: ACTUALLY, THE MAIN PLAN IS JUST COVERING EVERYTHING UP.

MR. HARRIS-BISHOP: YES.

MR. CABRAL: AND LET SOMEBODY ELSE WORRY ABOUT IT DOWN THE LINE WHO USES THE PROPERTY.

MR. HARRIS-BISHOP: TO PREVENT SOMEONE FROM COMING INTO CONTACT WITH IT, YEAH, THAT'S THE BEST ALTERNATIVE THAT WE CAN HAVE TO BE PROTECTIVE AND ALSO, YOU KNOW, HAVE SOME KIND OF LIMITED USE.

THE FOURTH ALTERNATIVE --

MR. MORENO: RICK MORENO. IS IT TOO EXPENSIVE TO CLEAN IT UP?

MR. HARRIS-BISHOP: YEAH.

MR. MORENO: IS THAT WHY YOU CAN'T CLEAN IT UP?

MR. HARRIS-BISHOP: THAT'S THE FOURTH ALTERNATIVE, WHICH WAS -- ACTUALLY, WE LOOKED AT A COUPLE OF ALTERNATIVES THAT WERE EXCAVATION AND OFF-SITE DISPOSAL OF THAT SOIL. THIS AREA WE'RE TALKING ABOUT IS ALMOST THREE-QUARTERS OF A MILLION CUBIC YARDS OF CONTAMINATED SOIL THAT WOULD HAVE TO BE REMOVED, AND THE ESTIMATED COST ON THAT IS ABOUT 120 MILLION DOLLARS, AND THIS HAS CURRENTLY BEEN A TAXPAYER FUNDED PROJECT, SO IT -- AND THE MAIN THING IS THAT THE RISKS THAT ARE POSED BY THE SITE WITH THAT MATERIAL ARE FAIRLY LOW. IF THIS WERE SOMETHING THAT WERE GOING TO BE AN IMMEDIATE HEALTH THREAT OR A HIGH

RISK MATERIAL THAT, YOU KNOW, CON -- WHERE PEOPLE COULD COME CONTAMINATED WITH, WE WOULD DO THAT. WE WOULD REMOVE THE SOIL, BUT THE CONTAMINATION IS FAIRLY LOW LEVELS, AND IT DOESN'T POSE A RISK UNLESS -- WE LOOKED AT RESIDENTIAL EXPOSURE, IF SOMEONE BUILT A HOUSE ON THIS PROPERTY AND LIVED THERE FOR 70 YEARS, WHAT KIND OF CONTAMINATION -- WHAT KIND OF RISKS WOULD BE POSED BY THIS, AND WE LOOKED AT IT, AND WE WERE ALMOST WITHIN OUR RISK RANGE NUMBERS WITHOUT DOING ANYTHING. BY PROVIDING THIS CAP, WE'RE REDUCING ANY POTENTIAL EXPOSURE AND BECOMING -- AND BEING PROTECTIVE WITHOUT HAVING TO EXCAVATE.

THE OTHER -- LET ME JUST SAY ONE THING. IF WE'D EXCAVATE IT, WE'D BE GENERATING A HUGE AMOUNT OF DUST. IF WE'RE GOING TO DO THIS ENTIRE AREA, THAT WOULD TAKE A LONG TIME AND WOULD EXPOSE THE SURROUNDING AREA, THE SCHOOL AND THE NEIGHBORHOODS TO A HIGHER RISK. IT'S A MUCH ELEVATED SHORT-TERM RISK THAT DOESN'T REALLY JUSTIFY THE RE -- THE OVERALL REDUCTION IN THE RISK AND THEN THE COST, YOU KNOW, IS AN ASTRONOMICAL COST.

THE QUESTION BEHIND THE FATHER FIRST.

MS. CALDERONE: MY NAME IS DEBORAH CALDERONE, AND I'M CONCERNED ABOUT THE SEISMIC ACTIVITY THAT WE HAVE HERE IN CALIFORNIA, AND NOTHING HAS BEEN SAID SO FAR ABOUT THE REQUIREMENTS, IF THAT MEETS REQUIREMENTS TO DATE, AND WITH THE CAPPING, WILL IT MEET FURTHER REQUIREMENTS?

MR. HARRIS-BISHOP: YEAH. THAT'S ONE -- IN THE -- I HAVE A BRIEF EXPLANATION IN THE FACT SHEET. WE HAVE REQUIREMENTS CALLED A.R.A.R.'S, WHICH ARE APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS THAT WE HAVE TO LOOK AT. ONE OF THE THINGS THAT WE LOOK AT AS A -- AS SOMETHING TO CONSIDER IS SEISMIC CRITERIA, AND SO WE WANT TO MAKE SURE THAT THIS CAN WITHSTAND AN EARTHQUAKE, THAT IT'S NOT GOING TO SHIFT AND CRACK. WITH THAT ADDED PLASTIC LINER, WE HAVE AN ADDED LEVEL OF PROTECTION BECAUSE THE PLASTIC IS MORE FLEXIBLE TO ALLOW FOR, YOU KNOW, SUBTLE MOVEMENTS, I MEAN -- SO WE WILL TRY AND BE PROTECTIVE OF THOSE SEISMIC CRITERIA.

YES, SIR.

FATHER GALLAGHER: I'D LIKE -- GALLAGHER -- AND I'D LIKE A CLARIFICATION OF WHAT YOU WERE JUST SAYING THERE. IF I WERE TO BUILD A HOUSE ON THAT PIECE OF PROPERTY AND LIVE IN THAT HOUSE FOR 70 YEARS, YOU ARE NOT -- YOU ARE SAYING THAT AS FAR AS THE E.P.A. WOULD BE CONCERNED, THAT THERE'D BE NO GUARANTEE THAT I WOULD BE EXPOSED TO ANY CONTAMINATED -- ANYTHING THAT WOULD HARM MY HEALTH AT ALL.

MR. HARRIS-BISHOP: THAT'S POSSIBLE. THE RISKS ARE ELEVATED BECAUSE OF THE LEVELS OF CONTAMINATION THAT WE HAVE HERE (INDICATING). LIKE I SAID, MOST OF THE SOIL CONTAMINATION IS BELOW GROUND, SO IF YOU JUST -- YOU KNOW, JUST EXISTED PURELY ON THE SURFACE, THE CONTAMINATION THAT

WE HAVE AT THE SURFACE IS LIMITED TO OVER HERE (INDICATING), WHICH IS WHY WE FENCED THAT PROPERTY IN 1988, AND SOME OF THE AREAS, I BELIEVE, THAT ARE ALREADY UNDER PAVEMENT WE FOUND SOME SURFACE CONTAMINATION, SO YEAH, I CAN'T SAY THAT, YOU KNOW, IF YOU BUILT A HOUSE THERE, YOU WOULD HAVE NO RISK, BUT THE RISKS ARE FAIRLY LOW, AND THAT SINCE MOST CONTAMINATION IS DOWN DEEP, YOU WOULDN'T RUN INTO THAT RISK UNLESS YOU DUG, BUT YOU WILL BE DIGGING IF YOU BUILD A HOUSE.

MR. MORENO: DOES METHANE COME UP LIKE AT THE LA BREA TAR PITS? YOU HAVE -- ALL THE TIME YOU HEAR OF EXPLOSIONS AND GAS, AND IT'S COMING UP ALL THE TIME EVEN THOUGH YOU HAVE PAVEMENT THERE.

MR. HARRIS-BISHOP: YEAH. WE DO -- THAT'S WHY WE WOULD BE LOOKING INTO THAT GAS TREATMENT AND COLLECTION SYSTEM. WE'VE ALREADY GOT WELLS DUG THAT HAVE DETECTED METHANE, BUT WE NEVER DETECTED ANYTHING AT THE SURFACE. WE DETECTED IT DOWN DEEP WHERE WE HAVE THE ORGANIC MATERIAL THAT'S DECOMPOSING CREATING METHANE, AND THERE'S METHANE THROUGHOUT THIS --

MR. MORENO: IS THAT CRUDE OIL?

MR. HARRIS-BISHOP: PARDON?

MR. MORENO: IS THAT CRUDE OIL?

MR. HARRIS-BISHOP: NO. IT'S ORGANIC RELATED MATERIAL, A LOT OF DECOMPOSED ORGANIC MATERIAL --

MR. MORENO: IS THERE ANY BENZENE --

MR. HARRIS-BISHOP: WE DID DETECT BENZENE IN ONE AREAS OR TWO AREAS DOWN, AGAIN, AT DEPTH AND NOTHING AT THE SURFACE. WHEN WE PUT OUR AIR MONITORS DOWN ON THE GROUND, WE DIDN'T DETECT ANY BENZENE OR -- WE DIDN'T DETECT ANYTHING OTHER THAN REGULAR AIR CONSTITUENTS, BUT WE WANT TO MAKE SURE THAT WE'RE NOT GOING TO CAUSE A BIGGER PROBLEM BY PUTTING A CAP ON THERE BECAUSE, AS YOU PROBABLY REALIZE, IF WE ARE PREVENTING GROUNDWATER FROM GETTING CONTAMINATED BY THE RAINWATER, WE'RE ALSO PREVENTING THE GASES FROM SLOWLY COMING UP, BUT WHAT WE HAVE IS THESE HOLES ALREADY DUG SO THAT WE CAN PULL THAT GAS OUT IF REQUIRED AND THEN BURN IT.

MS. HERRERA: BEFORE WE GO TO THE NEXT QUESTION, SIR, WOULD YOU PLEASE STATE YOUR NAME FOR THE RECORD?

MR. MORENO: RICK MORENO, M-O-R-E-N-O.

MR. HARRIS-BISHOP: OKAY.

FATHER GALLAGHER: DID YOU INTEND THIS ON BEING THE QUESTION AND ANSWER SESSION --

MR. HARRIS-BISHOP: ACTUALLY, IF I CAN JUST GET THROUGH -- I'M ALMOST FINISHED. I'M ALMOST AT THE END SO . . .

THE ALTERNATIVE FOUR WHICH WE LOOKED AT IN THE FEASIBILITY STUDY WAS LIMITED EXCAVATION AND JUST TAKING THE RED AREAS ON THIS MAP AND TAKING THEM TO AN OFF-SITE

DISPOSAL AREA, AN ACCEPTABLE HAZARDOUS WASTE DISPOSAL AREA, AND THEN, AGAIN, FENCING THIS CENTRAL PORTION TO PREVENT ANYONE FROM COMING INTO CONTACT WITH IT, SO THAT'S ALTERNATIVE FOUR.

LIKE I SAID EARLIER, WE ALSO LOOKED AT INITIALLY EXCAVATING ANY CONTAMINATED MATERIAL FROM THE SITE. THE VOLUME IS JUST HUGE. THE INCREASE IN SHORT-TERM RISKS IS HIGH, AND THERE'S NOT A REAL BENEFIT TO DOING THAT BECAUSE OF THE ADDED COST AND THE REDUCTION OF RISK IS SO SMALL BECAUSE WE'VE ALREADY GOT THE CONTAMINANTS THAT WE FOUND IN THE SOIL, LIKE ARSENIC, THALLIUM, BERYLLIUM AND OTHER METALS ARE ALREADY CONSTITUENT HERE. THEY'RE NATURALLY OCCURRING. THIS IS CALIFORNIA, AND WE HAVE AN ARSENIC -- YOU KNOW, IT'S JUST NATIVE TO HERE, SO WE HAVE, YOU KNOW, A BACKGROUND LEVEL CONTAMINATION THAT EVEN IF WE ELIMINATED THAT, IT WOULD JUST BE REALLY EXPENSIVE, AND WE WOULDN'T BE REDUCING THE RISK THAT MUCH FOR THE AMOUNT OF MONEY THAT WE'D BE SPENDING SINCE THE RISKS ARE FAIRLY LOW AT THE SITE ALREADY.

YES, SIR.

MR. SHARP: ALBERT SHARP. QUESTION: BACK TO FATHER GALLAGHER'S QUESTION. MY UNDERSTANDING IS THAT NO PERMANENT DWELLING OR BUILDING COULD BE BUILT ON THE GREEN AREA.

MR. HARRIS-BISHOP: YES.

MR. SHARP: YOU ASKED A QUESTION, IF I BUILT A HOUSE, WOULD I BE ABLE TO LIVE THERE AND NOT SUFFER ILL WILL, AND THE ANSWER WAS YES. MY UNDERSTANDING IS YOU CAN'T DO ANYTHING IN THE GREEN AREA EXCEPT MAKE IT A PARKING LOT OR A STORAGE AREA OR SOME OTHER -- MY PERSONAL FEELING -- UNDESIRABLE USE OF THE PROPERTY.

MR. HARRIS-BISHOP: YEAH. WHAT I WAS SAYING IS BASED ON THE CURRENT RISKS AT THE SITE, IF YOU WERE TO BUILD A HOUSE, NOT THAT YOU CAN --

MR. SHARP: YOU WOULDN'T BE ABLE TO GET A PERMIT.

MR. HARRIS-BISHOP: IF YOU WERE, I MEAN THE RISKS ARE LOW. I'M NOT SAYING THAT YOU ARE NOT GOING TO BECOME EXPOSED, BUT WHAT I'M SAYING IS THAT THE RISKS ARE FAIRLY LOW THAT YOU WOULD NOT SUFFER SOME ADVERSE CONSEQUENCE FROM THE CONTAMINATION, BUT THAT IS POSSIBLE, SO WHAT WE WANT TO DO IS PREVENT THAT CONTAMINATION FROM OCCURRING IN THE FUTURE, SO BY PROVIDING THIS CAP AND PREVENTING ANY CONSTRUCTION ON IT, WE WOULD PREVENT ANYONE FROM COMING INTO CONTACT WITH THE CONTAMINATION, AND THAT'S OUR FIRST GOAL IS TO PREVENT ANY CONTAMINATION OR EXPOSURE TO CONTAMINATION, POTENTIAL OR CURRENT, AND SINCE WE DON'T HAVE A CURRENT EXPOSURE, WE'RE LOOKING TO THE FUTURE TO BE PROTECTIVE, SO I THINK -- YOU HAD A QUESTION, MR. CABRAL?

MR. CABRAL: LOUIS CABRAL. WHEN YOU SAID -- ON THE

ST. PAUL OVER THERE, IF YOU PUT A CAP ON IT AND I TAKE THIS PIECE OF PAPER AND CAPPED IT AND STOPPED THE STUFF FROM COMING UP, OKAY, HOW ABOUT THE STUFF GOING UNDERNEATH AND GOING OUT FROM UNDERNEATH IT, WHAT ARE YOU GOING TO DO ABOUT THAT?

MR. HARRIS-BISHOP: THAT'S WHAT I SAID. WE'RE GOING TO BE LOOKING INTO HOW MUCH GAS IS ACTUALLY COMING UP, AND IF WE DO SEE GAS COMING UP, WE WILL HAVE THESE WELLS IN PLACE TO REMOVE IT. WE ALSO HAVE A PROPOSAL THAT'S INCLUDED IN THE FEASIBILITY STUDY THAT WOULD INCLUDE UNDERLAYING THE PLASTIC LINER WITH PERFORATED PVC TUBING THAT WOULD BE RUN INTO THE PUMP SYSTEM TO PULL OUT ALL THE GAS.

MR. CABRAL: I'M SAYING IT'S HARD HERE, AND IT'S HARD HERE, BUT IT'S STILL GOING UNDERNEATH AND GOING THIS WAY (INDICATING).

MR. HARRIS-BISHOP: THAT'S WHY WE WOULD BE PUMPING TO REMOVE THAT GAS. I RECOGNIZE THAT THAT'S A CONCERN, AND THAT'S A CONCERN OF MINE IS IF WE ASSUME THAT THE GAS IS COMING UP FROM THE SOIL ALREADY, AND WE JUST HAVEN'T BEEN ABLE TO DETECT IT, BUT IF WE PUT A CAP DOWN OR -- YOU KNOW, WE WANT TO MAKE SURE THAT THAT DOESN'T HAPPEN. THAT'S WHY WE'VE INCLUDED THE GAS --

MR. CABRAL: THE FENCE WILL NOT HOLD.

MR. HARRIS-BISHOP: PARDON?

MR. CABRAL: THE FENCE WILL NOT HOLD ON THAT DOTTED LINE ON THE ST. PAUL SIDE.

MR. HARRIS-BISHOP: THE FENCE WILL NOT HOLD?

MR. CABRAL: RIGHT. THE GAS.

MR. HARRIS-BISHOP: NO, NO, NO, NO. IN FACT, THIS IS A PARKING LOT THROUGH HERE (INDICATING). WE'RE GOING TO HAVE PIPING AND PUMPS AND VAPOR WELLS TO --

MR. CABRAL: YOU CAN'T TELL ME GAS IS SMART ENOUGH TO GO INTO THE PIPES.

MR. HARRIS-BISHOP: WELL, IT'S GOING TO RISE BECAUSE METHANE RISES, AND SO THEN WE'RE GOING TO BE COLLECTING IT THROUGH THOSE PIPES, AND THOSE PIPES WILL BE ATTACHED TO A PUMP THAT PULLS THE AIR AND CREATES A VACUUM THAT WILL SUCK IT INTO A TREATMENT -- A COLLECTION AND THEN BURNING SYSTEM. SO -- YES, SIR.

FATHER GALLAGHER: YOU MEAN SIMILAR TO WHAT THEY'RE DOING AT SHERATON INDUSTRY HILLS?

MR. HARRIS-BISHOP: YEAH, I BELIEVE --

FATHER GALLAGHER: THAT IS A HOTEL COMPLEX THAT IS COMPLETELY OPERATED BY THE METHANE GAS THAT IS COMING FROM THAT LANDFILL BELOW IT.

MR. HARRIS-BISHOP: YEAH. I BELIEVE THEY USE IT AS POWERING THEIR GENERATOR OR SOMETHING.

FATHER GALLAGHER: I HAVE A COUPLE OTHER --

MR. HARRIS-BISHOP: UH-HUH.

FATHER GALLAGHER: ALL OF THIS -- I DON'T KNOW IF THIS IS A QUESTION OR COMMENT OR SOMETHING, BUT IT DOES STRIKE ME AS BEING A LITTLE BIT STRANGE THAT WE ALREADY HAVE A CITY GOVERNMENT EMPOWERED TO MAKE DECISIONS FOR THE PEOPLE WITHIN THE CITY BUT THAT THE E.P.A. WOULD COME IN AND BECOME MORE RESTRICTIVE THAN YOU FEEL THAT THE CITY OF SANTA FE SPRINGS WOULD BE WITH OUR ALREADY ELECTED OFFICIALS, AND YOU WOULD PUT SOMETHING -- YOU WOULD FORCE THE CITY TO COMPLY BEYOND JUST THE NORMAL LEVEL OF CONCERN THAT THE PEOPLE WHO LIVE RIGHT HERE IN THE CITY WOULD ALREADY HAVE ABOUT WHAT IS GOING ON IN THE CITY. THAT WOULD BE ONE THING THAT I WOULD -- WOULD SAY.

GALLAGHER. THE SECOND THING IS -- IT HAS TO DO WITH THE WHOLE IDEA ABOUT THE WORD CONTAMINATION IS THAT, YOU KNOW, THERE'S A LOT OF PARENTS HERE WHO HAVE CHILDREN WHO GO TO ST. PAUL, AND WHEN PEOPLE THINK CONTAMINATION, I THINK THAT A LOT OF TIMES THEY'RE THINKING ABOUT NUCLEAR CONTAMINATION, THE THREAT OF WHAT IS AIRBORN, WHAT IS SOIL-BORN, AND I WAS LED TO UNDERSTAND IN OUR CONVERSATIONS THAT ACTUALLY THAT WHATEVER CONTAMINATION THERE IS REALLY A METALLIC CONTAMINATION FROM A VERY MINOR KIND OF A NORMAL INDUSTRY OUTPUT LIKE OIL, SLUDGE THAT WAS A PART OF WHAT WAS GOING ON HERE, AND ACTUALLY THAT WILL NOT OOZE FROM ONE PIECE OF PROPERTY TO THE NEXT PIECE OF PROPERTY WITHOUT ANY KIND OF A MAJOR CATASTROPHE.

MR. HARRIS-BISHOP: YEAH. LIKE I SAID, THE RISKS THAT ARE POSED BY THE SITE CURRENTLY ARE VERY LOW, ALMOST WITHIN WHAT E.P.A.'S CONSIDERS SAFE ALREADY. WHAT WE WANT TO MAKE SURE WE DO IS BE PROTECTIVE IN THE LONG TERM AND IN THE FUTURE, AND THAT'S WHY WE DON'T WANT TO WAIT UNTIL SOMEONE STARTS TO DIG AND BECOMES EXPOSED TO ADDRESS THE PROBLEMS, SO WE'RE TRYING TO BE PROTECTIVE AND PREVENTIVE IN THAT RESPECT.

AS FAR AS, YOU KNOW, THE CITY OF SANTA FE SPRINGS NOT BEING PROTECTIVE, I WOULDN'T SAY THAT AT ALL. RIGHT NOW, LIKE I SAID, THIS IS, YOU KNOW, PROTECTIVE. THERE'S NOT A RISK POSED BY THE SITE CURRENTLY, SO WHAT WE'RE DOING IS THIS IS E.P.A.'S JOB IS TO ENSURE PROTECTIVENESS IN THE LONG TERM, AND THAT'S WHAT WE'RE TRYING TO DO.

YES, MA'AM.

MS. AGUILAR: MY NAME'S VIRGINIA AGUILAR, AND FROM THE FIELD OF ST. PAUL'S TO THE AREA YOU REFER TO, IT'S ABOUT FIVE FEET HIGH IF YOU VIEW IT, SO YOU SAY THAT AREA IS FIVE FEET. YOU'RE ALREADY -- THAT LEVEL WOULD BE CONTAMINATED, AND THEN YOU'RE GOING TO BRING ALL THAT DIRT FROM ALL AROUND IT AND PILE IT ON TOP AND THEN ANOTHER CAP. HOW HIGH IS THIS GOING TO BE?

MR. HARRIS-BISHOP: I DON'T THINK WE'RE GOING TO BE MORE THAN ABOUT A FOOT AND HALF ABOVE WHAT IS CURRENTLY THERE, AND I THINK THAT'S AN OVERESTIMATE BECAUSE WE DO

HAVE -- IN THAT AREA IT'S NOT VERY SMOOTH, AND THE AREA OVER AT ST. PAUL'S IS A LOT HIGHER, BUT THAT'S ALSO ADDED SOIL THAT THEY BROUGHT IN WHEN THEY CLOSED THE SITE. YOU KNOW, THE RESERVOIR WAS REMOVED FROM THIS HIGH SCHOOL ATHLETIC FIELD, AND THEN THEY PILED DIRT ALL AROUND IT, AND THEY BROUGHT IT UP TO ITS CURRENT SITE.

MS. AGUILAR: YOU SAID IT'S FIVE FEET AND THEN CONTAMINATION. IT IS ABOUT FIVE FEET WHERE YOU'RE STANDING.

MR. HARRIS-BISHOP: IT'S ACTUALLY -- IT'S FIVE FEET, AND SO IF YOU LOOK AT IT FROM THE SIDE, WE'RE ALSO TALKING AT LEAST FIVE FEET OF SOIL WAS BROUGHT IN ON THE INSIDE. THEY MOSTLY DUMPED -- LET ME GET THE AERIAL PHOTOGRAPH. EITHER WE DETECTED LEAKS OR STANDING LIQUIDS AROUND HERE (INDICATING) BACK WHEN ALL THIS WAS LEVEL, AND THEN THEY BROUGHT IN A LOT OF SOIL TO BRING IT TO THE CURRENT CONFIGURATION. WHAT WE WANT TO DO IS WITH THE CAP COVER ANY OF THAT AREA THAT'S ELEVATED FROM SANTA -- ST. PAUL'S HIGH SCHOOL AND COVER IT WITH ASPHALT TO MAKE SURE THAT NO ONE -- YOU KNOW, NONE OF THAT CONTAMINATION COULD SEEP THROUGH. IT HASN'T, YOU KNOW, IN 30 YEARS SINCE IT'S BEEN CLOSED, BUT WE WANT TO MAKE SURE THAT IT DOESN'T HAPPEN UNDER SOME, YOU KNOW, CIRCUMSTANCES.

MS. AGUILAR: SO ACTUALLY IT'S GOING TO BE LIKE CONTAMINATION AND THEN THE DIRT YOU PUT IN AND THEN THE

CONTAMINATION ON TOP OF THAT THAT'S ON THE SIDES AROUND THERE?

MR. HARRIS-BISHOP: YEAH. LET ME --

MS. AGUILAR: SOUNDS GREAT.

MR. HARRIS-BISHOP: IT WILL LOOK LIKE -- WHAT WE HAVE CURRENTLY HAVE IS THIS CONFIGURATION RIGHT HERE (INDICATING), THIS CONTAMINATED SOIL AND THEN THE SOIL THAT'S ON THE COVER. IN SOME PLACES, IT'S ACTUALLY ABOUT 15 FEET DEEP BEFORE WE DETECTED ANY CONTAMINATION, BUT GENERALLY IT IS FIVE FEET.

MS. AGUILAR: AND THEN THE SOIL THAT'S CONTAMINATED, YOU'RE GOING TO DIG IT OUT AND PUT IT ON TOP OF THAT. AND THAT DOESN'T CAUSE DEBRIS AROUND, THAT WOULD BE LIKE CLEANING IT OUT?

MR. HARRIS-BISHOP: IT WOULD BE -- IT'S A LOT LESS, AND WE COULD CONTROL THAT WITH DUST SUPPRESSION EQUIPMENT. WE'RE GOING TO HAVE TO MONITOR TO MAKE SURE WE'RE NOT IMPACTING ANY AIR QUALITY. THAT'S ONE OF THE LAWS THAT WE HAVE TO OBEY BY DOING THIS, SO WE'RE NOT GOING TO CONTAMINATE OR CONTRIBUTE TO ANY FURTHER AIR CONTAMINATION THAN ALREADY EXISTS. ALSO, WHAT WE'RE GOING TO BE DOING IS WE'RE NOT GOING TO BE PUTTING IT RIGHT UP ALONG THIS BOUNDARY HERE. WHAT WE WANT TO MAKE SURE IS THAT THE CAP HAS UNIFORM DRAINAGE, SO IT'S GOING TO PROBABLY BE MOUNTED IN THE CENTER HERE SO WE CAN HAVE SOME KIND UNIFORM

DRAINAGE ALONG THE EDGES, SO I DON'T THINK YOU'RE GOING TO BE SEEING A LARGE INCREASE IN THE GRADE ABOVE SANTA FE SPRINGS HIGH SCHOOL.

MR. OPALSKI: THERE'S ANOTHER ELEMENT ABOUT THE CURRENT CONDITIONS, WHICH IS IF THIS IS -- IF THIS IS THE SURFACE OF THE SOIL COVER THAT'S ON THERE RIGHT NOW? IT'S NOT LIKE THIS (INDICATING).

MS. AGUILAR: NO, IT'S LIKE THIS (INDICATING).

MR. OPALSKI: ACTUALLY, IT'S SUPPOSED TO BE KIND OF LIKE THAT, BUT IT'S ACTUALLY MORE LIKE GOT PITS IN IT. IT'S A SURFACE THAT LOOKS MORE LIKE THAT (INDICATING), SO WHEN WE'RE ADDING THE SOIL IN, PART OF THE POINT WILL BE TO ADD IN THE EXCAVATED SOIL TO SMOOTH OUT THE SURFACE.

MR. CABRAL: ISN'T THAT CONTAMINATED STUFF YOU'RE PUTTING IN NOW?

MR. OPALSKI: YEAH.

MR. HARRIS-BISHOP: LOW LEVEL CONTAMINATION, PROBABLY AT A LEVEL THAT WOULDN'T EXCEED SHORT-TERM EXPOSURE WITH NO RESTRICTION. WHAT WE WANT TO DO IS IF YOU'RE EXPOSED TO THIS MATERIAL OVER A LONG PERIOD OF TIME, 70 YEARS LIVING IN IT, YOU WOULD HAVE A POTENTIAL -- AN INCREASED RISK OF CANCER.

MR. CABRAL: WHY NOT JUST GET IT AND TAKE IT OUT OF THE AREA COMPLETELY?

MR. HARRIS-BISHOP: WE ACTUALLY LOOKED AT THAT, AND

THAT WAS THE FOURTH ALTERNATIVE. IT BECOMES A LOT MORE EXPENSE, AND THEN WHAT WE'RE DOING IS WE'RE PUTTING IT INTO A TRUCK, TRUCKING IT THROUGH YOUR NEIGHBORHOODS TO THE FREEWAY TO THEN PUT IT INTO THE DIRT SOMEWHERE ELSE WHEN IT REALLY POSES VERY LITTLE RISK RIGHT NOW. WHAT WE WANT TO DO THOUGH -- THE REASON WE'RE EXCAVATING IT IS SO WE CAN FREE UP THE PROPERTY THAT IS CONTAMINATED AND UNDEVELOPED FOR SOME FURTHER DEVELOPMENT, BUT LIKE I WANT TO JUST POINT OUT AND JUST REMIND EVERYONE THAT WHAT WE'RE TALKING ABOUT HERE IS E.P.A.'S PROPOSED ALTERNATIVE, AND WE CAN LOOK AT A LOT OF DIFFERENT ALTERNATIVES HERE. SOME OF THE THINGS THAT WE'VE SPOKEN TO, AND I SPOKE TO THE CITY COUNCIL LAST THURSDAY NIGHT AND SPOKE TO SOME OF THE PROPERTY OWNERS THURSDAY AND THEN AGAIN TODAY, IS SOME KIND OF HYBRID OF THAT, SO, YOU KNOW, IF WE WANT GRASS OVER A PORTION OF IT AND ASPHALT OVER A PORTION OF IT, WE CAN WORK WITH THAT. WHAT WE WANT TO DO IS MAKE SURE WE'RE PROTECTIVE, AND WE HAVE A LOT OF ALTERNATIVES. ALL THESE ALTERNATIVES OFFER VARYING DEGREES OF PROTECTION. WE FEEL THAT THIS ONE MEETS -- THE MOST PROTECTIVE GOALS AND STILL MEETS WITH ACCEPTANCE AND, YOU KNOW, FUTURE USE AND ECONOMIC DEVELOPMENT OF THE AREA.

IF OUR PROPOSAL IS NOT ACCEPTABLE TO THE COMMUNITY, THAT'S WHAT WE'RE HERE TO DISCUSS TONIGHT AND TAKE YOUR COMMENTS ON, AND, YOU KNOW -- BECAUSE SINCE WE

HAVEN'T MADE OUR DECISION, WE'RE GOING TO GO BACK AND TAKE YOUR COMMENTS AND THEN USE THOSE TO ADJUST OUR DECISION.

MS. HERRERA: RUSTY?

MR. HARRIS-BISHOP: YES, MA'AM.

MS. CAMERENE: MY NAME IS MARYSOL CAMERENE, AND THE CONTAINMENT OPTION 3C, E.P.A.'S PREFERRED ALTERNATIVE, IF THAT IS CHOSEN, HOW LONG WILL IT TAKE THAT WHOLE PROCESS TO TAKE CARE OF THAT PREFERRED ALTERNATIVE? SECONDLY, WHO WILL BE VOTING FOR IT, THE CITY OF SANTA FE SPRINGS? WHO WILL DETERMINE THE ALTERNATIVE?

MR. HARRIS-BISHOP: THIS IS AN E.P.A. PROJECT, SO E.P.A. WILL BE MAKING THIS DECISION ALONG WITH THE COMMUNITY, AND THAT'S WHY WE'RE HERE TO MAKE THIS DECISION OR START MAKING THIS DECISION TONIGHT. WE ENVISION -- WHAT WE'LL DO IS ONCE WE MAKE OUR DECISION AND WRITE UP THAT RECORD OF DECISION, WE HAVE TO LET EVERYONE KNOW THAT WE MADE THE DECISION AND THEN GIVE THE PEOPLE THAT WE DETERMINE MAY BE POTENTIALLY RESPONSIBLE FOR THE CONTAMINATION TO COME FORWARD, AND WE HAVE TO GIVE THEM THE OPPORTUNITY TO DO THIS WORK FOR US. SO FAR E.P.A. HAS DONE IT. WE PROPOSED TO THE POTENTIALLY RESPONSIBLE PARTY BACK IN '88 TO HAVE THEM DO THE WORK, AND WE DIDN'T HAVE ANYONE COME FORWARD AND AGREE TO DO THIS WORK, SO E.P.A., WE WENT FORWARD AND DID IT.

WE WILL AGAIN GO FORWARD AND ASK THEM TO

IMPLEMENT THIS DESIGN AND THE REMEDIAL ACTION, AND IF WE DON'T GET ANY TAKERS, E.P.A. WILL AGAIN DO IT, AND WE HOPE TO START -- WE HAVE, YOU KNOW, STATUTORY LIMITS. WE HAVE TO GIVE PEOPLE AT LEAST, I THINK, 60 DAYS INITIALLY AND THEN ANOTHER 60 DAYS AFTER THAT, SO IT WOULD BE AT LEAST FOUR MONTHS AFTER WE STARTED BEFORE WE COULD DO ANYTHING, BUT I'D ENVISION US GETTING STARTED BY EARLY -- BY THE MIDDLE OF NEXT YEAR. PROBABLY MARCH OR APRIL TIME FRAME WOULD PROBABLY BE THE EARLIEST WE CAN GET STARTED.

YES, FATHER.

FATHER GALLAGHER: A QUESTION ABOUT THE ENCAPSULATION OF THAT AREA. WHEN WE HAD OUR DISCUSSION, YOU LED ME TO BELIEVE THAT IF THE AREA REMAINED GRASSY, THEN NOTHING COULD REALLY OCCUR ON THAT -- ON THAT PROPERTY IN TERMS OF ANY KIND OF BUSINESS VENTURE.

MR. HARRIS-BISHOP: YEAH, BECAUSE WE --

FATHER GALLAGHER: IN THE FUTURE. BUT IF IT'S ASPHALTED, THEN IT COULD BE USED FOR SOME KIND OF A LIMITED BUSINESS VENTURE.

MR. HARRIS-BISHOP: YEAH.

FATHER GALLAGHER: FOR EXAMPLE.

THEN I WAS WONDERING ABOUT THE SAFETY. FOR EXAMPLE, IF YOU HAVE A SCHOOL YARD OR A PLAYING FIELD WHERE THERE ARE CONSISTENTLY STUDENTS PLAYING AND A HIGHER ELEVATED ASPHALT COVERED AREA PROPERTY THAT COULD BECOME

ANY NUMBER OF DIFFERENT THINGS WHERE WE WOULD CONTINUALLY HAVE TO BE WORRIED OF LOOKING UP AND WONDERING WHAT IS -- WHAT COULD POSSIBLY BE COMING FROM THAT HIGHER ELEVATION AT ALL, I THINK THERE WOULD BE SOME LIABILITY ON THE PART OF THE GOVERNMENT FOR AC -- OR FOR PUTTING IN SOMETHING WHERE WE WOULD BE CONCERNED ABOUT -- I WOULD ALWAYS BE CONCERNED ABOUT WELL, WHAT'S HAPPENING OVER THERE WHICH WE HAVE NO CONTROL OVER? I WOULD HAVE CONTROL OVER WHO WAS ON OUR PROPERTY, BUT I WOULDN'T HAVE CONTROL OVER WHO IS STANDING ON THE -- ON THE PIECE OF PROPERTY ABOVE US LOOKING DOWN AT THE STUDENTS WHO ARE UNPROTECTED. SO, YOU KNOW, IT'S SIMPLY A QUESTION OR A COMMENT, BUT I DO THINK THAT THERE'D SOME GOVERNMENTAL LIABILITY IF SOMETHING WERE TO OCCUR.

MR. HARRIS-BISHOP: OKAY. LET ME SAY THAT IS A GOOD COMMENT THAT WE PROBABLY SHOULD, YOU KNOW, ADDRESS OR AT LEAST HAVE RECORDED AGAIN DURING THE FORMAL COMMENT PERIOD. I GUESS WE MAY BE MOVING INTO THAT PERIOD ANYWAY. LET ME -- IF YOU'D LIKE TO BRING THAT UP AGAIN -- UNLESS WE'RE FINISHED WITH QUESTIONS.

MS. HERRERA: ACTUALLY, I THINK WE WILL PROBABLY WANT TO COME BACK TO QUESTIONS BECAUSE WE WANT TO MAKE SURE WE TAKE ALL THE COMMENTS. SO WHY DON'T WE OPEN THE COMMENT PERIOD RIGHT NOW, AND IF WE HAVE TIME AFTER THE COMMENT PERIOD, THEN WE CAN COME BACK TO THE QUESTIONS.

MR. HARRIS-BISHOP: AND I'LL BE -- WE'LL BE HERE AS

LATE AS YOU ALL NEED US TO BE TO ANSWER QUESTIONS, SO WE'RE NOW OFFICIALLY IN THE FORMAL COMMENT PERIOD.

MS. HERRERA: AND WE WILL NOT RESPOND TO YOUR COMMENTS TONIGHT.

MR. SHARP: ALBERT SHARP, AND THIS IS REALLY A QUESTION. WHY WASN'T BIO REMEDIATION PUT IN THERE AS ONE OF THE ALTERNATIVES? IT'S A METHOD WE'VE USED SUCCESSFULLY OF CLEANING UP SOME OF THE OIL PROPERTIES IN THE CITY THE CITY WANTED TO REDEVELOP DURING THE REDEVELOPMENT AGENCY. I DON'T SEE THAT LISTED AS ANY TYPE OF ALTERNATIVE, YET IT'S PROBABLY THE MOST SUCCESSFUL METHOD CURRENTLY USED THROUGHOUT THE WORLD.

MR. HARRIS-BISHOP: WE DID ACTUALLY LOOK AT BIO REMEDIATION THE PROBLEM IS WE HAVE ARSENIC IN THE SOIL AT ELEVATED LEVELS THAT IS NOT GOING -- BIO REMEDIATION ISN'T GOING TO DO ANYTHING ABOUT THAT.

MR. SHARP: BUT IF WE CLEANED UP EVERYTHING EXCEPT THE ARSENIC, THEN IT WOULD BE A SIMPLE THING TO ISOLATE AND REMOVE.

MR. HARRIS-BISHOP: ACTUALLY, THAT'S THE WHOLE POINT IS THAT WE HAVE ARSENIC THROUGHOUT THIS SITE, AND ARSENIC IS WHAT DRIVES THIS WHOLE RISK, SO THAT WE COULDN'T -- I MEAN WE HAVE ARSENIC IN ALMOST EVERY SOIL BORING THAT'S AT ELEVATED LEVELS FOR A HEALTH CONCERN SO THAT WE COULDN'T ISOLATE ARSENIC. BASICALLY WE'D BE EXCAVATING THAT

ENTIRE -- THE ENTIRE SITE SINCE BIO REMEDIATION IS GOING ON ALREADY TO SOME EXTENT. THAT'S THE REASON WHY METHANE IS BEING GENERATED. IT'S TAKING CARE OF THE ORGANIC CONSTITUENTS, WHICH ISN'T THE MAIN FACTOR IN THE RISK. THE MAIN FACTOR IN THE RISK HAS BEEN THE METALS AS FAR AS -- THAT'S WHAT I'VE DETERMINED SO FAR.

DID YOU HAVE A QUESTION OR A COMMENT, MISS?

MS. CAMERENE: MARYSOL CAMERENE. IN WHAT PHASE DID YOU CHOOSE THE 3C ALTERNATIVE, BECAUSE IT IS LESS EXPENSIVE?

MR. HARRIS-BISHOP: NO. IT'S ACTUALLY ABOUT -- WE LOOK AT -- IN THE FACT SHEET WE TALK ABOUT SELECTING A REMEDY, AND WE LOOK AT NINE CRITERIA. COST IS ONLY ONE OF THEM. COMMUNITY ACCEPTANCE IS ALSO ONE OF THEM. THE FIRST ONE WE LOOK AT IS TO BE PROTECTIVE, AND THIS ALTERNATIVE IS PROTECTIVE. THEN WE LOOK AT -- IF YOU WANT TO GO THROUGH THEM WITH ME IF EVERYONE HAS A COPY. THEN THE NEXT ONE IS COMPLIANCE WITH A.R.A.R.S., WHICH ARE THE REGULATIONS WE HAVE TO COMPLY WITH WHILE WE'RE DOING OUR WORK; LONG-TERM EFFECTIVENESS, WHICH I SAID IS WHY WE'RE DOING THIS RATHER THAN JUST WAITING UNTIL SOMEONE BECOMES EXPOSED. THIS IS PROTECTING THE LONG TERM.

REDUCTION OF TOXICITY, MOBILITY OR VOLUME IS ANOTHER ALTERNATIVE WE NORMALLY LOOK AT WHICH INVOLVES A TREATMENT OPTION. WE DID EVALUATE DIFFERENT TREATMENT

ALTERNATIVES, BUT NONE OF THEM WERE EFFECTIVE FOR REDUCING THE TOTAL RISK THAT WE HAVE AT THIS SITE. WE ARE GOING TO BE REDUCING SOME OF THAT VOLUME THROUGH THE GAS TREATMENT SYSTEM IF THAT'S NECESSARY. WE'RE ALSO REDUCING MOBILITY BECAUSE WE'RE PREVENTING WATER FROM FLUSHING ANY CONTAMINANTS INTO THE GROUNDWATER. THEN COST, SHORT-TERM EFFECTIVENESS, IMPLEMENTABILITY, WHICH MEANS ARE WE TALKING ABOUT TRYING TO BUILD SOMETHING THAT'S REALLY DIFFICULT. ASPHALT PAVING IS A FAIRLY COMMON PRACTICE, SO WE WOULDN'T HAVE THAT IMPLEMENTABLE PROBLEM, AND THEN THE LAST TWO ARE STATE AND COMMUNITY ACCEPTANCE, SO WE TAKE A LOOK AT ALL THESE CRITERIA IN MAKING OUR DECISION, AND THERE'S ACTUALLY A TABLE IN THE FEASIBILITY STUDY THAT SAYS HOW WE FEEL THAT EACH OF THESE SEVEN MEETS THESE CRITERIA, AND SO IF YOU FEEL THAT ONE COMPONENT OF OUR -- AN ALTERNATIVE WOULD WORK BETTER, THAT'S WHAT WE'D LIKE TO HEAR FROM YOU.

I ALSO WANT TO STRESS IF YOU DON'T WANT TO MAKE YOUR COMMENTS EARLIER TODAY, THE COMMENT PERIOD GOES UNTIL SEPTEMBER 12, AND WE ACCEPT WRITTEN COMMENTS, AND MY ADDRESS IS ON THE BACK OF THE FACT SHEET, SO YOU CAN JUST WRITE A LETTER TO ME. YOU CAN HANDWRITE IT; IT DOESN'T MATTER. AND SEND IT TO ME, AND THAT WILL BE INCORPORATED INTO OUR RECORD OF DECISION, AND THEN I'LL BE ADDRESSING THOSE COMMENTS AS WELL AS ANY OF THE COMMENTS THAT WE'RE HAVING HERE TONIGHT.

MR. CABRAL: ON THAT GAS YOU WERE PICKING UP, HOW ARE THEY GOING TO EXPOSE IT, GET RID OF IT?

MR. HARRIS-BISHOP: WE'LL BE FLARING IT SINCE IT'S METHANE IS THE PREDOMINANT --

MR. CABRAL: DOESN'T THAT MAKE A GREAT NOISE?

MR. HARRIS-BISHOP: BURNING METHANE?

MR. CABRAL: YES.

MR. HARRIS-BISHOP: NO. IT'S GOING TO BE LIKE A SMALL BURNER. IT SHOULDN'T HAVE ANY EFFECT -- IT SHOULDN'T BE VERY NOISY.

MR. CABRAL: THE ONES UP AT ROSE HILLS, THAT MAKES A LOT OF NOISE.

MR. HARRIS-BISHOP: THE VOLUME THAT WE'RE TALKING ABOUT IS A LOT SMALLER METHANE. IN FACT, WE MAY NOT EVEN HAVE ENOUGH METHANE TO IGNITE, SO WE'LL HAVE -- THOSE ARE GOING TO BE THINGS THAT WE HAVE TO EVALUATE.

MR. CABRAL: IN OTHER WORDS, YOU'RE GOING TO SAVE IT AND LET IT GO INTO THE AIR.

MR. HARRIS-BISHOP: I DON'T KNOW IF WE'RE ALLOWED TO DO THAT BASED ON THE AIR QUALITY IN THIS AREA. IF IT ISN'T CONSIDERED TO BE AN ADDITIONAL, YOU KNOW, CONTAMINANT -- I'M SURE IT WOULD BE THOUGH. WE WOULD HAVE TO DO SOMETHING, EITHER CONTAIN IT AND HAUL IT OFF-SITE OR ELSE IGNITE IT WHENEVER IT BECOMES INTO THAT KIND OF CONCENTRATION.

MR. CABRAL: SO THAT WOULD BE MAKING A GREAT NOISE.

MR. HARRIS-BISHOP: I DON'T -- IT'S LIKE A GAS BURNER ON YOUR OVEN. WE'RE NOT TALKING ABOUT A LARGE VOLUME OF GAS HERE.

MR. CABRAL: I'VE WORKED ON THE ONE IN ROSE HILLS, AND THAT MAKES A LOT OF NOISE.

MR. HARRIS-BISHOP: THAT'S A LEGITIMATE COMMENT THAT WE'LL LOOK INTO.

MS. HERRERA: RUSTY, WE'RE RUNNING OUT OF TIME, SO WE WANT TO MAKE SURE EVERYBODY HAS A CHANCE TO EXPRESS THEIR COMMENTS, AND IF WE HAVE EXTRA TIME, THEN WE'RE GOING TO GO BACK TO THE QUESTION AND ANSWER SESSION.

MR. HARRIS-BISHOP: I THINK THOSE ARE GOOD COMMENTS.

MS. HERRERA: RIGHT NOW WE'D LIKE TO ENCOURAGE ANYONE THAT HAS ANY COMMENTS TO STATE THEM FOR THE RECORD.

MS. AGUILAR: WHEN IS THE FINAL DECISION?

MR. HARRIS-BISHOP: WE'RE HOPING TO MAKE THAT BY THE END OF SEPTEMBER. ONCE THIS PUBLIC COMMENT PERIOD IS OVER, WE'LL TAKE ALL THE COMMENTS THAT WE HAVE, AND WE'LL ADDRESS THEM ALL, AND THEN WE WRITE OUR RECORD OF DECISION, WHICH INCLUDES, YOU KNOW, THE SITE BACKGROUND, THE RESPONSIVENESS SUMMARY TO ALL THE COMMENTS, AND IF IT'S SIGNIFICANTLY DIFFERENT FROM OUR PROPOSED PLAN, WE'LL WRITE DOWN WHAT THE SIGNIFICANT DIFFERENCES ARE IN THAT.

MS. AGUILAR: SO IF CITIZENS DECIDE THAT THEY DON'T

AGREE WITH YOU, HOW DO THEY -- WOULD IT BE LIKE EACH INDIVIDUAL PERSON OR ONE BIG GROUP OR HOW DO YOU DO THAT?

MS. HERRERA: YOU CAN --

MR. HARRIS-BISHOP: ACTUALLY, YOU CAN SUBMIT LETTERS TO ME INDIVIDUALLY OR, YOU KNOW, IF YOU HAVE A NEIGHBORHOOD COMMUNITY GROUP OR SOMETHING LIKE THAT, YOU COULD SUBMIT A LETTER UNDER THEM WITH THE UNDERSIGNED OR SOMETHING. IT'S NOT -- IT'S MORE WHAT THE -- THE COMMENT IS. IF IT'S SOMETHING THAT, YOU KNOW, YOU'RE JUST DRAMATICALLY OPPOSED TO US DOING, THEN WE HAVE TO LOOK AT DOING SOMETHING DIFFERENT. IT'S A TRADEOFF, AND THAT'S WHY I PRESENTED ALL SEVEN OF THESE BECAUSE ALL OF THESE HAVE, YOU KNOW, ACCEPTABILITY AND UNACCEPTABLE ELEMENTS OF IT, SO E.P.A., I THINK -- EXCEPT FOR THE NO ACTION ALTERNATIVE, ALL OF THESE OFFER SOME LEVEL OF PROTECTION THAT -- WITH THE, YOU KNOW, PROPER CONTROL. SOME OF THEM MAY TAKE MORE WORK AS FAR AS THE CITY CONTROLLING IT OR THE STATE COMING IN AND, YOU KNOW, MONITORING IT OR E.P.A. DOING MORE WORK TO BE PROTECTIVE, BUT ALL OF THESE OFFER A LEVEL OF PROTECTION, AND IT'S LISTED IN THE FACT SHEET SO THAT WE CAN -- OUR GOAL TO BE PROTECTIVE, BUT WE ALSO WANT TO MEET COMMUNITY NEEDS, SO IF THE COMMUNITY IS OPPOSED TO THIS, WE'LL TAKE THOSE -- THAT COMMENT BACK, AND WE'LL WORK WITH IT AT OUR OFFICE.

AND THEN -- I MEAN THIS ISN'T THE FINAL PART OF,

YOU KNOW, THE COMMUNITY INVOLVEMENT. ONCE WE WRITE OUR RECORD OF DECISION, WE'LL LET EVERYONE KNOW WHAT THAT DECISION IS. WHEN WE IMPLEMENT DESIGN, WHEN WE START DOING THE DESIGN WORK, WHICH WILL BE IN PHASES, WE'LL BE LETTING PEOPLE KNOW HOW THE DESIGN IS GOING, WHAT WE PROPOSE TO DO AND HOW THE DESIGN IS COMING OUT, AND PEOPLE WOULD HAVE THE OPPORTUNITY TO COMMENT AGAIN AT THAT TIME, SO IT'S -- THIS IS ONLY THE START OF, YOU KNOW, THE PROCESS.

MS. AGUILAR: I HAVE A SMALL QUESTION BETWEEN 3C AND 3D. NOW, IT SAYS -- ON BOTH OF THEM IT SAYS LIMITED EXCAVATION. ON THE ONE THAT YOU PROPOSE, IS THAT THE ONE WHERE YOU TAKE THE STUFF AROUND AND PILE IT IN THE MIDDLE?

MR. HARRIS-BISHOP: YEAH.

MS. AGUILAR: AND THEN THE THIRD ONE IS THE ONE WHERE YOU JUST CAP EVERYTHING IN GENERAL?

MR. HARRIS-BISHOP: THE SECOND ONE ACTUALLY, THE ONE THAT SAYS ASPHALT CAP-NO EXCAVATION? WE'D BE CAPPING ANY AREA THAT HAD -- THAT ISN'T ALREADY PAVED ON THAT SITE BASICALLY.

MS. AGUILAR: SO IT WOULD BE THE WHOLE ENTIRE PLACE, INCLUDING SOME OF THE PINK SITES YOU HAVE THERE. SO IT WOULD BE 3B, NO EXCAVATION.

MR. HARRIS-BISHOP: YEAH. AND THEN 3A IS ALSO A NO EXCAVATION ALTERNATIVE WHERE WE'D HAVE JUST SOIL AND VEGETATION EVERYWHERE RATHER THAN ASPHALT.

MS. AGUILAR: IN OTHER WORDS, PLANTS AND STUFF.

MR. HARRIS-BISHOP: PLANTS, GRASS. PROBABLY NICER THAN THE STUFF RIGHT NOW THAT'S THERE. WE'VE GOT ALL THOSE WEEDS. WE WOULD VEGETATE SO IT WOULD BE A LOW MAINTENANCE AREA.

MS. AGUILAR: BETWEEN C AND D, I DIDN'T QUITE GET THAT. ONE HAS ASPHALT, AND THE OTHER ONE JUST HAS -- WHAT'S --

MR. HARRIS-BISHOP: ACTUALLY, THE R.C.R.A. CAP WHICH IS DESCRIBED IN THE REGULATIONS IS MORE LEVELS, MORE LAYERS BETWEEN THE ASPHALT CAP AND THE -- AND THE BOTTOM. THERE'S ACTUALLY AN OPTION UNDER A R.C.R.A. CAP TO MAKE SOIL ON TOP OF EVERYTHING ELSE, SO WE WOULD HAVE THESE ADDITIONAL BARRIERS, BASICALLY MORE PLASTIC LAYERS AND MORE ROCK LAYERS, AND THEN WE'D HAVE EITHER ASPHALT OR SOIL ON TOP OF THAT, BUT LIKE I SAID, THAT'S AT LEAST FIVE FEET THICK, THE R.C.R.A. CAP, SO THAT JUST ADDS A HUGE, AN EVEN LARGER GRADE ABOVE THE SCHOOL AND ABOVE THE REST OF THE PROPERTY, BUT WE DID EVALUATE THAT, AND THAT'S INCLUDED IN THE FACT SHEET, THE COSTS.

IF I CAN JUST TAKE A BREAK. I NEED TO RUN AND GET A GLASS OF WATER OR GET A DRINK.

MR. OPALSKI: ANY OTHER COMMENTS?

MS. HERRERA: ANY OTHER COMMENTS?

FATHER GALLAGHER: ARE YOU ON THE COMMENT SECTION?

MS. HERRERA: YEAH, COMMENT SECTION.

FATHER GALLAGHER: I UNDERSTOOD THE COMMENT SECTION WAS GOING TO HAVE NO ANSWERS TO IT, SO . . .

MS. HERRERA: THAT'S RIGHT. SO THIS IS A GOOD TIME FOR THE COMMENT SECTION. I'M HAVING A HARD TIME KEEPING RUSTY QUIET.

FATHER GALLAGHER: WHICH SECTION IS WHICH SECTION?

MS. HERRERA: THIS IS THE COMMENT PERIOD SO GO AHEAD AND STATE YOUR COMMENTS IF YOU HAVE ANY.

MR. SHARP: MY NAME'S ALBERT SHARP. ONCE AGAIN, I THINK THERE ARE MORE OF THE PEOPLE HERE -- I THINK WE HAVE MORE QUESTIONS WE WANT TO ASK, AND I DON'T KNOW THAT THE COMMENTS REALLY MATTER TO US AT THIS POINT IN TIME.

MR. HARRIS-BISHOP: OKAY.

MR. SHARP: WE CAME HERE TO ASK SPECIFIC QUESTIONS, AND I THINK WE OUGHT TO SACK THE COMMENT PERIOD AND ASK THE QUESTIONS SO THE NEIGHBORS COULD HAVE THEM ANSWERED.

I HAVE A QUESTION -- ALBERT SHARP IS ASKING THE QUESTION -- DO YOU HAVE THE MONEY? DO YOU HAVE FIVE AND A HALF MILLION TO SPEND ON THIS 3C?

MR. HARRIS-BISHOP: WE DON'T HAVE IT RIGHT NOW. WHAT WE HAVE TO DO IS GET IT FROM E.P.A. HEADQUARTERS AND MAKE SURE THAT IT'S BUDGETED BY CONGRESS.

MR. SHARP: AND WHAT IS THE LIKELIHOOD OF THAT HAPPENING IN MY LIFETIME?

MR. HARRIS-BISHOP: IT'S VERY GOOD. WE ARE NOT TALKING ABOUT -- E.P.A. MANAGEMENT HAS APPROVED OF THIS SO FAR, SO I MEAN IT'S NOT SOMETHING THAT IS THAT CONTROVERSIAL AS FAR AS E.P.A. IS CONCERNED THAT WE'RE GOING TO BE SPENDING A LOT OF MONEY THAT MAY NOT BE EFFECTIVE. I DON'T THINK -- I DON'T ENVISION THAT BEING A PROBLEM. WE CLEAN UP -- WE'RE DOING THIS KIND OF WORK ALL OVER THE STATE, ALL OVER THE COUNTRY.

YES, MA'AM.

MS. CABRAL: IRENE CABRAL. SO WHO IS GOING TO MAKE THE FINAL DECISION WHAT IS GOING TO BE DONE, E.P.A., COUNCIL?

MR. HARRIS-BISHOP: E.P.A. DOES BECAUSE WE'RE THE LEAD AGENCY, AND THIS IS OUR JOB TO MAKE THESE DECISIONS, BUT WHY WE'RE HERE IS TO BRING THE PUBLIC INTO THE DECISION-MAKING PROCESS, AND THAT'S --

MS. CABRAL: BUT THEY'RE NOT GOING TO HAVE THE FINAL DECISION, THE PUBLIC.

MR. HARRIS-BISHOP: THAT'S WHY WE'RE HERE TONIGHT.

MS. CABRAL: YOU'RE JUST GOING TO TAKE COMMENTS.

MR. HARRIS-BISHOP: AND THAT AFFECTS OUR DECISION. IF EVERYONE SAYS, YOU KNOW, "NO, WE DON'T WANT YOU TO DO THIS," THAT'S SOMETHING THAT WE HAVE TO TAKE INTO ACCOUNT, AND WE CAN'T JUST GO AGAINST THE COMMUNITY IN IMPLEMENTING THIS AND MAKING OUR DECISION AND JUST GOING ON. THAT'S WHY

WE'RE HERE BECAUSE WE WANT TO MAKE SURE THE COMMUNITY ACCEPTS WHAT WE'RE DOING AND THAT THEY HAVE PARTICIPATION IN THE PROCESS.

YES, SIR, MR. CABRAL.

MR. CABRAL: I DON'T LIVE IN SANTA FE SPRINGS. I LIVE IN SOUTH WHITTIER.

MR. HARRIS-BISHOP: THAT'S FINE.

MR. CABRAL: BUT I'M QUITE CONCERNED ABOUT WHAT'S HAPPENING HERE, AND IS MY VOTE GOING TO BE COUNTED OR IS IT GOING TO BE JUST THE PEOPLE THAT LIVE AROUND IT?

MR. HARRIS-BISHOP: WELL, I THINK THAT ACTUALLY THE BOUNDARY OF SANTA FE SPRINGS STOPS AROUND THE SITE. WHAT WE'RE CONCERNED WITH IS PEOPLE WHO ARE AFFECTED BY THE SITE.

MR. CABRAL: YEAH, BUT IT'S ALL CONSTRUCTION AROUND IT, AND THERE'S A SCHOOL, AND FATHER GALLAGHER AND BROTHER DENNIS ACTUALLY LIVE IN THERE AND MAYBE A DOZEN OTHER PEOPLE. BUT ON THE OTHER SIDE ACROSS THE STREET, ARE THEY GOING TO HAVE A CHANCE TO VOTE, AND IF THEY KNOW NOTHING ABOUT IT, HOW ARE THEY GOING TO MAKE A DECISION?

MR. OPALSKI: LET ME CLARIFY THAT IT'S NOT REALLY A VOTE.

MR. CABRAL: THEN WHY ARE WE HERE THEN?

MR. OPALSKI: BECAUSE THE COMMENTS DO MAKE A DIFFERENCE.

MR. CABRAL: I MEAN IF YOU'RE GOING TO DO IT REGARDLESS WHAT YOU'RE GOING TO DO, WE'RE WASTING OUR TIME BEING HERE.

MR. OPALSKI: WE'RE GOING TO CONSIDER ALL THE COMMENTS NO MATTER WHERE THEY COME FROM.

MR. CABRAL: IN OTHER WORDS, WHAT YOU'RE SAYING IS WHATEVER WE SAY IS NOT GOING TO MAKE ANY DIFFERENCE.

MR. OPALSKI: NO, THAT'S NOT WHAT I'M SAYING. I'M SAYING WE'RE GOING TO CONSIDER ALL THE COMMENTS.

MR. CABRAL: BUT THAT'S ALSO WHAT I'M SAYING. HOW MANY PEOPLE IS IT GOING TO TAKE TO MAKE A DECISION IF WE DON'T WANT IT?

MR. OPALSKI: WELL, THIS IS ANOTHER THING I WANT TO CLARIFY. IF YOU ARE NOT LIKING THE PREFERRED ALTERNATIVE, WE NEED TO HEAR MORE THAN THAT YOU JUST DON'T LIKE IT. WE NEED TO HEAR WHY BECAUSE THERE ARE OTHER CRITERIA WE HAVE TO LOOK AT ASIDE FROM COMMUNITY ACCEPTANCE, FOR INSTANCE, PROTECTIVENESS. WE HAVE A BASELINE RESPONSIBILITY TO MAKE SURE THIS REMEDY IS PROTECTIVE ESSENTIALLY NO MATTER WHAT OTHER PEOPLE ARE FEELING ABOUT IT, SO IF IN OUR PROFESSIONAL JUDGMENT IT'S SOMETHING THAT OTHER PEOPLE ARE WANTING THAT'S NOT PROTECTIVE, WE ARE OTHERWISE BOUND NOT TO ALLOW THAT TO GO FORWARD, OKAY? SO IT'S -- COMMUNITY ACCEPTANCE IS ONE OF THE CRITERIA WE LOOK AT, AND, THEREFORE, WE WANT TO LOOK AT ALL THE COMMENTS THAT COME

IN. IT DOESN'T REALLY MATTER WHERE YOU LIVE. WE CONSIDER ALL THE COMMENTS.

YES, MA'AM.

MS. AGUILAR: VIRGINIA AGUILAR. MY COMMENT IS THAT THE -- WE HAVE CHILDREN PLAYING OUT THERE EVERY DAY HARD, BREATHING HARD, BREATHING THAT GAS YOU'RE GOING TO PUT UP IN THE AIR HARD RIGHT NEXT TO IT. I'M TALKING A FEW FEET FROM THERE. WHY CAN'T THEY JUST CLEAN IT? CLEAN IT.

MR. HARRIS-BISHOP: THIS IS JUST COMMENT. WELL, I WOULD LIKE TO ADDRESS IT JUST TO SAY I EXPLAINED IT EARLIER. BY DIGGING THAT UP, WE'RE CAUSING A MUCH HIGHER SHORT-TERM RISK THAT WE'RE NOT GOING TO BE ELIMINATING, YOU KNOW, ULTIMATELY THAT MUCH OF A RISK FOR THE AMOUNT OF WORK AND THE AMOUNT OF MONEY THAT THAT COSTS. I MEAN IT'S ENORMOUSLY EXPENSIVE, 20 TIMES --

MR. CABRAL: HOW MUCH IS --

MR. HARRIS-BISHOP: AND WHAT WE HAVE RIGHT HERE IS WE DON'T HAVE A CURRENT RISK. WE DON'T HAVE A RISK POSED TO THE PEOPLE, THE STUDENTS, AND MARILYN UNDERWOOD IS A TOXICOLOGIST WHO HAS REVIEWED THIS FOR THE STATE AND HAS THE SAME OPINION, THAT THE CURRENT RISK TO THIS SITE -- POSED BY THE SITE ARE VERY LOW, AND WHAT WE WANT TO DO IS MAKE SURE THAT OUR REMEDY AND WHATEVER DECISION THAT WE COME TO IS PROTECTIVE, AND THAT'S OUR FIRST GOAL. RIGHT NOW THERE'S NOT A CURRENT RISK PROPOSED BY THE SITE.

MR. MORENO: I HAVE A COMMENT AND A QUESTION.

MR. HARRIS-BISHOP: YES, SIR.

MR. MORENO: THAT'S WHAT OFFICIALS AND COMPANY OWNERS AND FACTORY OWNERS SAID IN TEXAS, THAT THERE WAS NO RISK, SO THAT'S MY COMMENT. AND I HAVE A QUESTION. DURING THE PERIOD OF EXCAVATION, THE KIDS, THEY'RE GOING TO BE EXPOSED TO THE GASES, ESPECIALLY MORE THAN THE TIME THAT IT'S COVERED UP. WOULD THEY BE CLOSING THE SCHOOL DURING THAT PERIOD OF TIME OR -- I KNOW IT MAY NOT BE A QUESTION FOR YOU, BUT THAT WOULD BE MY CONCERN.

MR. HARRIS-BISHOP: WHAT WE'RE DOING -- THAT'S A CONCERN OF OURS TOO, TO MAKE SURE THAT WE'RE NOT IMPACTING ANYBODY'S HEALTH AND ANYBODY'S BUSINESS, SO WHAT WE'RE GOING TO DO IS WORK WITH THE SCHOOL TO MAKE SURE -- WE COULD DO THIS EXCAVATION DURING NON-SCHOOL YEAR. I MEAN SCHOOL'S OUT FOR A COUPLE MONTHS IN THE SUMMER. WE CAN DO IT, YOU KNOW, ALONG WITH ANYONE ELSE'S PLANS IF THERE'S SOMETHING THAT'S IMPACTING ACROSS THE STREET AT THE BUSINESS NEXT STORE. WHAT WE ARE GOING TO BE DOING THOUGH IS TAKING PRECAUTIONS WITH DUST SUPPRESSION TO LIMIT THE AMOUNT OF DUST THAT IS GENERATED. WE HAVE TO COMPLY WITH LAWS, CALIFORNIA REGULATIONS AS TO HOW MUCH CAN BE EMITTED ANYWAY, SO WE ARE GOING TO HAVE TO BE WITHIN THOSE REQUIREMENTS, SO THE LAWS ARE PROTECTIVE, AND WE'RE GOING TO MAKE SURE OUR ACTIONS ARE ALSO PROTECTIVE.

MS. HERRERA: WILL YOU STATE YOUR NAME FOR THE RECORD?

MR. MORENO: RICK MORENO, M-O-R-E-N-O.

MS. HERRERA: THERE'S A QUESTION IN THE BACK.

MR. CALDERONE: MY NAME'S DENNIS CALDERONE. YOU HAVE ALL THESE STUDIES. HAVE YOU EVER HAD A STUDY ON HEALTH OR THE PEOPLE THAT ARE AROUND THAT AREA AS FAR AS I MEAN, YOU KNOW, CERTAIN HEALTH DANGERS OR WHATEVER'S IN THAT CERTAIN AREA OR DO YOU HAVE ANY?

MR. HARRIS-BISHOP: MARILYN, DO YOU WANT TO TAKE THAT?

MS. UNDERWOOD: I'M FROM THE CALIFORNIA DEPARTMENT OF HEALTH SERVICES. WE HAVE ACTUALLY A COOPERATIVE AGREEMENT WITH THE FEDERAL AGENCY TO LOOK AT HEALTH ISSUES AROUND SUPERFUND SITES. THIS AGENCY HAD LOOKED AT THAT -- NOT D.H.S., BUT THIS AGENCY LOOKED AT THE SITE IN 1988, FELT THAT IT MIGHT POSE A POTENTIAL PATHWAY OF CONCERN OR HEALTH CONCERN. AT THAT POINT, THERE WAS VERY LITTLE DATA. I'M JUST IN THE PROCESS OF REVIEWING THE SITE RIGHT NOW, AND I THINK BASED ON WHAT I SEE, I WOULD NOT SAY THAT THERE'S A NEED FOR A HEALTH STUDY AROUND THIS AREA BECAUSE I DON'T THINK THERE'S BEEN PATHWAYS OF EXPOSURE THAT WOULD ELICIT ENOUGH -- ANY DISEASE ACTUALLY IN THIS AREA TO SEE, SO IF I FELT -- AND WE DO THIS ACROSS CALIFORNIA. I HAVE REVIEWED OTHER SITES WHERE I THINK IT'S SOMETHING THAT'S WARRANTED, TO DO A HEALTH STUDY.

MR. CALDERONE: THEY WERE TALKING ABOUT THE AREA AND

EVERYTHING ELSE, BUT I DON'T KNOW IF THEY MENTIONED PEOPLE'S HEALTH.

MR. HARRIS-BISHOP: WHAT I WANT TO STRESS IS WE DON'T CURRENTLY HAVE THAT EXPOSURE, AND WE WANT TO MAKE SURE WE DON'T HAVE THAT EXPOSURE IN THE FUTURE.

YES, SIR.

FATHER GALLAGHER: AND MY POINT WOULD BE THE POINT THAT I HAVE MADE BEFORE IS THAT I THINK THAT THERE SHOULD BE A CLARIFICATION ABOUT THE WORD CONTAMINATION BECAUSE THERE IS -- CONCERN OBVIOUSLY HAS BEEN EXPRESSED BY SOME PEOPLE AND COMMENTS THAT HAVE BEEN MADE IN TERMS OF, YOU KNOW, LIKE IS THERE A GREATER INCIDENT OF LUNG CANCER? IS THERE A GREATER INCIDENT OF SOME KIND OF PROBLEM OF HEALTH BASICALLY BECAUSE OF THE -- OF THE LOCATION OF THE WASTE DUMP NEAR US, AND THAT IS WHERE I THINK THAT THERE IS A PROBLEM BECAUSE YOU VERY QUICKLY GO TO A POINT WHERE YOU SAY WELL, THERE'S METHANE GAS BEING USED TO OPERATE THE SHERATON INDUSTRY HILLS, AND PEOPLE ARE OUT THERE PLAYING GOLF EVERY DAY, AND ALL OF US WHO LIVE IN WHITTIER ARE RECEIVING ALL OF THE EMISSIONS THAT ARE COMING FROM A NUMBER OF THE PLANTS IN SANTA FE SPRINGS ALL THE TIME, SO I THINK THAT WHAT WE'RE TRYING TO DO IS TRYING TO FIND OUT WELL, IS THERE A REASON FOR US TO BE CONCERNED ABOUT THE HEALTH OF OUR CHILDREN, THE PEOPLE WHO LIVE ACROSS THE STREET, YOU KNOW, BASED ON THIS, AND THAT IS EXACTLY WHAT

I'M HOPING THAT IS GOING TO BE DISCUSSED AS PART OF THE PUBLIC SERVICE INVOLVED WITH THIS.

SO -- AND I'D LIKE TO MAKE A COMMENT NOW. YOU DON'T HAVE TO ANSWER IT THOUGH BECAUSE I'D LIKE TO -- MY NAME'S ROBERT GALLAGHER. I'M THE PRINCIPAL OF ST. PAUL HIGH SCHOOL. I WOULD LIKE TO SAY THAT WE ARE VERY APPRECIATIVE OF THE WORK OF THE E.P.A. THE SCHOOL HAS COOPERATED WITH A NUMBER OF THE STUDIES THAT HAVE GONE ON IN TERMS OF WHETHER OR NOT THERE IS SOME PROBLEM, AIRBORN OR SOIL-BORN, IN TERMS OF THE HEALTH OF OUR STUDENTS OR ANYTHING THAT WE SHOULD BE CONCERNED ABOUT. IF IN CONJUNCTION WITH THE CITY OF SANTA FE SPRINGS, WHO WE BELIEVE ARE RESPONSIBLE INDIVIDUALS ELECTED BY THE MEMBERS OF THE CITY, THAT SOMETHING SHOULD BE DECIDED TO BE DONE ON THAT PROPERTY, THAT WE WOULD PREFER THAT NOTHING WOULD BE ABOVE THE LEVEL OF THE PROPERTY IN TERMS OF BUSINESS WHERE WE WOULD HAVE TO BE CONCERNED ABOUT THE SAFETY OF THE STUDENTS AT SOME FUTURE DATE BASED ON A DECISION OF SOMEBODY OTHER THAN US ABOUT WHO IS GOING TO OWN THAT PROPERTY OR USE THAT PROPERTY OR WE WOULD WANT SOMETHING, FOR EXAMPLE, A WALL OR THE GOVERNMENT TO PROVIDE SOME KIND OF PROTECTION SO THAT WE WOULD NOT HAVE TO BE CONCERNED ABOUT THE SAFETY OF OUR STUDENTS, SO IF WE HAD A COMMENT TO MAKE, I WOULD THINK THAT IT WOULD BE THAT WE WOULD PREFER THAT IT NOT BE ASPHALT, THAT IT WOULD REMAIN EXACTLY THE

WAY IT IS, AND IF THERE IS ABSOLUTELY NO PROBLEM RIGHT NOW AND IF I COULD BUILD A HOUSE THERE THAT I COULD LIVE ON FOR 70 YEARS WITH NO PROBLEM, WELL, THEN I WOULD JUST ASSUME SEE THAT THINGS BE LEFT AS THEY ARE RIGHT AT THIS MOMENT.

MR. HARRIS-BISHOP: THANK YOU.

MR. SHARP: ALBERT SHARP. COMMENT: ALONG WITH FATHER GALLAGHER, I AS A CITY COUNCILMAN IN THIS CITY HAVE NO DESIRE TO SEE ANYTHING HAPPEN ON THAT SITE AS FAR AS A STORAGE YARD OR ANYTHING. I THINK EVERY MEMBER OF THE E.P.A. IN THIS ROOM KNOWS HOW I FEEL ABOUT PUTTING ASPHALT DOWN. I DON'T WANT TO SEE A BLACK OR A GREEN MOUNTAIN. AS FAR AS I'M CONCERNED, IF THERE'S NOTHING WRONG WITH THE SOIL, WHY DON'T WE JUST PLANT WILD FLOWERS OVER IT, MAKE IT AS AESTHETICALLY PLEASING TO THE COMMUNITY AS WE POSSIBLY CAN AND LET THAT SLEEPING DOG LIE IF THERE'S NO -- ALL WE'RE DOING IS JUST COVERING IT SO SOMEONE CAN COME IN AND SET SOME TRACTORS AND TRUCKS AND TRAVEL TRAILERS AND WHATEVER ELSE ON IT. NO, I'M NOT IN FAVOR OF THAT.

MR. HARRIS-BISHOP: THANK YOU.

MR. SHARP: BUT I DON'T KNOW HOW MUCH VOICE THE CITY OF SANTA FE SPRINGS EVEN HAS.

MR. HARRIS-BISHOP: I WOULD LIKE TO JUST REITERATE THAT IT IS IMPORTANT THAT WE HEAR THESE COMMENTS. THAT'S? WHY WE LOOKED AT A LOT OF THESE DIFFERENT ALTERNATIVES, AND THEY'RE ALL OPEN FOR COMMENT. I THINK THAT'S DEFINITELY A

LEGITIMATE CONCERN, AND IF WE CAN DETERMINE IF THAT'S PROTECTIVE AND EVERYONE WANTS TO GO WITH THAT, WE CAN DO THAT. I MEAN THERE'S GOING TO BE RESTRICTIONS ON THE USE OF THE PROPERTY ANYWAY, SO IF WE WANT TO JUST RESTRICT AND MAKE IT A BEAUTIFUL GRASSY GREEN FIELD THAT EVERYONE CAN DRIVE BY AND ENJOY, THAT'S A POSSIBILITY, AND THAT'S ONE OF THE ALTERNATIVES THAT WE LOOKED AT. IT'S ALSO -- WE COULD MIX COMPONENTS OF THE ALTERNATIVES SO THAT WE HAVE -- WE'VE ALREADY GOT A PARKING LOT OVER PART OF THE AREA WHERE SANTA FE SPRINGS STORAGE IS. WE CAN WORK AROUND THAT. THERE'S A LOT OF DIFFERENT ALTERNATIVES WE HAVE. I MEAN I REALLY DO APPRECIATE THESE COMMENTS BECAUSE IT WILL HELP ME GO BACK, AND WHEN WE'RE WRITING THE DECISION, IF WE COME UP WITH SOMETHING DIFFERENT, YOU'LL KNOW BECAUSE WHEN WE COME OUT AND TELL YOU WHAT OUR DECISION IS, IT'S GOING TO -- IT WON'T BE A PROPOSED PLAN IF EVERYONE FEELS THAT WE NEED TO DO SOMETHING DIFFERENT.

MS. HERRERA: THERE'S SOMEONE ELSE IN THE BACK.

MS. CALDERONE: MY NAME IS DEBORAH CALDERONE, C-A-L-D-E-R-O-N-E, AND MY COMMENT AND CONCERN BASICALLY GOES BACK TO SEISMIC ACTIVITY. I HAVE CHILDREN THAT GO TO ST. PAUL. IF WE HAVE A MAJOR CATASTROPHE -- IT COULD BE TODAY, TOMORROW, TEN YEARS FROM NOW -- MY KIDS HAVE TO GO OUT THERE ON THAT FIELD. IS THERE ANY WARNING SIGNS, BELLS OR SOMETHING TO SAY THAT, YOU KNOW, THERE IS TOXIC WASTE

GOING OUT IN THE AIR, METHANE GAS? ARE THEY GOING TO BE EXPOSED AND HARMED BY THIS IF THEY'RE OUT THERE IN THE FIELD? I MEAN WHAT IS THE LIMITS TO WHERE THEY WOULD BE EXPOSED?

MR. HARRIS-BISHOP: I DON'T KNOW IF I CAN ANSWER YOUR QUESTION RIGHT NOW. I DON'T ENVISION THAT IF WE HAD AN EARTHQUAKE -- I MEAN THERE WAS A SIGNIFICANT EARTHQUAKE HERE, I THINK, IN THE LATE '80'S THAT WE DIDN'T SEE ANY -- YOU KNOW, DISTINCTIVE SHIFT IN ANY STRUCTURE AT THE SITE. WHAT WE WOULD BE DOING THOUGH IS TO MAKE SURE THAT THAT'S PROTECTIVE. IF THERE WERE, YOU KNOW, SOME KIND OF RELEASE, THEN WE WOULD HAVE TO ADDRESS IT AT THAT TIME. I CAN'T SAY RIGHT NOW THAT IF THERE IS SOME EARTHQUAKE, THAT NOTHING IS GOING TO HAPPEN BECAUSE I CAN ENVISION A PRETTY BIG EARTHQUAKE.

MS. CALDERONE: COMMENTS WERE MADE BY THE STUDENTS THAT THEY SAW FOG OR STEAM COME FROM THIS AREA AFTER ONE OF THE LAST EARTHQUAKES. THAT WAS MY CONCERN IS HOW MUCH WAS TRUTH TO IT OR NOT? I DON'T KNOW.

MR. HARRIS-BISHOP: I'M NOT AWARE OF THAT AT ALL. I DON'T THINK THAT YOU WOULD BE ABLE TO SEE METHANE IF IT WERE RISING. IT'S A --

FATHER GALLAGHER: THAT'S A CLARIFICATION ON THAT. THERE WAS NOTHING THAT CAME FROM THAT PIECE OF PROPERTY AT ALL; THAT THERE WAS A GAS BUBBLE OR A GAS CLOUD THAT CAME

OVER THE AREA THAT CAME FROM A DIFFERENT INDUSTRIAL SITE IN THE CITY OF SANTA FE SPRINGS, BUT IT HAD NOTHING TO DO WITH THAT PIECE OF PROPERTY RIGHT NEXT TO IT, AND I THINK MR. SHARP WOULD AGREE WITH THAT.

MR. HARRIS-BISHOP: WHAT WE'VE DETECTED THUS FAR HAS JUST BEEN FAIRLY SMALL, AND I CAN'T ENVISION SOMETHING COMING UP THAT WE COULD SEE, BUT WE'LL KEEP MONITORING THAT, AND ANY OF THESE ALTERNATIVES, WE'LL CONTINUE TO MONITOR THE GAS AND THE GROUNDWATER TO MAKE SURE THAT WE ARE MAINTAINING PROTECTIVENESS.

YES, SIR, MR. CALDERONE.

MR. CALDERONE: MY NAME IS DENNIS CALDERONE. YOU'RE TALKING ABOUT PUTTING THE DAISIES AND EVERYTHING. IS THERE ANY WAY THAT YOU CAN PUT A NICER LOOKING FENCE INSTEAD OF BARBED WIRE OR A HIGHER FENCE?

MR. HARRIS-BISHOP: I THINK THAT'S A LEGITIMATE COMMENT. THAT'S SOMETHING WE'LL LOOK INTO.

MR. MORENO: RICK MORENO. TO BE A SUPERFUND SITE, DOES THAT MEAN THAT THIS SOIL IS EXTREMELY CONTAMINATED OR IS IT JUST -- YOU KNOW, IT JUST DOESN'T GET ON THE SUPERFUND SITE JUST FOR NOTHING, RIGHT?

MR. HARRIS-BISHOP: WHAT WE DO WHEN WE'RE DOING THIS PRELIMINARY INVESTIGATION, BEFORE IT'S LISTED ON THE NATIONAL PRIORITIES LIST, WE MAKE A LOT OF ASSUMPTIONS. WE TAKE A LIMITED NUMBER OF SAMPLES AND THEN PUT IT INTO A

MODEL TO SEE IF IT COULD POTENTIALLY CAUSE A PROBLEM. A PROBLEM WITH ANY MODEL IS THAT YOU MAKE ASSUMPTIONS, AND, YOU KNOW, THE NUMBERS CAME OUT, AND WE SAID THIS IS POTENTIALLY ENOUGH FOR --

MR. MORENO: SO IT IS VERY CONTAMINATED PROBABLY.

MR. HARRIS-BISHOP: I WOULDN'T SAY IT'S VERY CONTAMINATED. IT'S JUST THAT OUR ASSUMPTIONS WERE --

MR. MORENO: MORE THAN JUST A LITTLE BIT.

MR. HARRIS-BISHOP: OUR ASSUMPTIONS LED US TO BELIEVE THAT IT WOULD BE MORE CONTAMINATED THAN WE ULTIMATELY IN DOING OUR THOROUGH INVESTIGATION THAT WE DID FOUND IT TO BE. WHAT WE FOUND IS THAT -- I MEAN THERE ARE CONTAMINANTS HERE THAT ARE OF CONCERN. THEY'RE MOSTLY DEEP. THEY'RE NOT READILY ACCESSIBLE TO THE PUBLIC, BUT AS I SAID, IN THE FUTURE THEY COULD BE BY SOMEONE GOING OUT THERE.

MR. MORENO: IF THERE'S AN EARTHQUAKE OR WHATEVER.

MR. HARRIS-BISHOP: I DON'T THINK IF THERE'S AN EARTHQUAKE, YOU'D SEE AN EXPLOSION DOWN AT 35 FEET.

MR. MORENO: BECAUSE THE KIDS DID SEE THAT CLOUD COME FROM THAT SOIL.

MR. HARRIS-BISHOP: AS FATHER GALLAGHER SAID, THAT WAS FROM ANOTHER FACILITY.

MR. MORENO: NO, THAT WAS THAT SITE, 43 ACRE SITE WE ARE TALKING ABOUT.

MR. HARRIS-BISHOP: ACTUALLY, I CAN'T SPEAK TO THAT AT

ALL BECAUSE I CAN'T ENVISION ANYTHING -- SOMETHING THAT YOU COULD SEE COMING FROM THE SITE. IT'S JUST NOT -- THE CONTAMINATION IS JUST NOT --

MR. MORENO: AND THERE HAVE BEEN REPORTS OF ODORS. I DON'T KNOW HOW MANY PEOPLE HAVE GOTTEN SICK. THERE'S BEEN -- THERE HAVE BEEN THOSE REPORTS.

MR. HARRIS-BISHOP: WELL, IT'S A DEFINITE COMMENT.

MR. MORENO: DEPENDING ON THE DIRECTION OF THE WIND.

MR. HARRIS-BISHOP: I'LL TAKE A LOOK AND SEE IF I CAN FIND OUT ANYTHING. FROM MY PERSONAL OPINION AND WHEN I HAVE EVALUATED, I CAN'T SEE --

MR. MORENO: THE REASON -- I'M A ST. PAUL PARENT AS WELL. I'VE HAD TWO KIDS GRADUATE FROM THERE, AND I HAVE ONE THAT'S CURRENTLY ATTENDING, AND WE HAVE TWO MORE COMING UP, SO WE'RE GOING TO BE ASSOCIATED WITH ST. PAUL FOR MANY, MANY YEARS, AND --

MR. HARRIS-BISHOP: I DEFINITELY UNDERSTAND YOUR CONCERN. THAT'S WHY I AM HERE.

MR. MORENO: WE'RE CONCERNED WITH OUR KIDS AND THEN THE OFFSPRING AS WELL. WHAT WILL HAPPEN 30 YEARS DOWN THE LINE, WE DON'T KNOW.

MR. HARRIS-BISHOP: I UNDERSTAND. THAT'S WHY WE'RE HERE. THAT'S WHY I FEEL CONFIDENT IN SAYING THAT --

MR. MORENO: WE'RE ASKING YOU BECAUSE YOU HAVE OTHER EXPERIENCES. DO YOU HAVE OTHER SIMILAR SITES?

MR. HARRIS-BISHOP: I ACTUALLY DON'T HAVE ANY SITES THAT ARE LIKE W.D.I., BUT BASED ON THE EVIDENCE FROM WHAT WE'VE SEEN AT W.D.I., THE RISKS JUST ARE VERY, VERY SMALL --

MR. MORENO: BECAUSE WE'RE VERY CONCERNED BECAUSE YOU HEAR OF WHAT GOES ON IN TEXAS AND MEXICO AND OTHER AREAS AND EVEN IN CALIFORNIA, AND IT'S -- IT'S VERY -- YOU KNOW, YOU HAVE NIGHTMARES OVER THIS, AT LEAST I DO.

MR. HARRIS-BISHOP: THAT'S WHY WE'RE HERE TO TAKE YOUR -- LISTEN TO YOUR CONCERNS AND ADDRESS THEM, AND I'LL BE THE FIRST ONE TO SAY I THINK THAT THE SITE'S RISKS -- RISKS POSED BY THE SITE ARE --

MR. MORENO: JUST THAT ONE RISK THAT YOU'RE TALKING ABOUT. IF IT'S JUST A MINIMUM RISK, THE RISK EXISTS.

MR. HARRIS-BISHOP: YES, SIR, I UNDERSTAND.

ANDY?

MR. LAZZARETTO: LAZZARETTO. HAS THE E.P.A. DEVELOPED A PROFILE, A TOPOGRAPHIC PROFILE, OF HOW THE SITE WOULD LOOK AFTER THE IMPLEMENTATION OF THE ALTERNATIVE?

MR. HARRIS-BISHOP: NO. THAT WOULD BE DONE DURING ANY DESIGN THAT WE DO ULTIMATELY FOR THE SITE. I MEAN THE ONLY THING I HAVE IS KIND OF THIS REALLY ROUGH SCHEMATIC WHICH MORE -- MORE OR LESS REALLY JUST SHOWS THE LAYERS THAT WE'RE GOING TO HAVE --

MR. LAZZARETTO: THEN I WOULD MAKE THE COMMENT THAT

SOME WORK BEFOREHAND SHOULD BE DONE TO MAKE REPRESENTATION OF HOW -- HOW THE SITE WILL LOOK GIVEN THE FACT THAT MORE EARTH IS GOING TO BE PLACED ON TOP SO THAT THERE'S SOME GOOD IDEA SO PEOPLE CAN MAKE, I THINK, AN INFORMED DECISION OF HOW IT'S GOING TO LOOK ULTIMATELY.

MR. HARRIS-BISHOP: ABOUT HOW HIGH OR SOMETHING --

MR. LAZZARETTO: I'D LIKE TO ASK ONE MORE QUESTION WHILE I HAVE THE FLOOR. IN THE AREAS ALONG GREENLEAF THAT ARE SHOWN IN PINK, THE HATCHED PINK, WHAT IS THE NATURE OF THE CONTAMINATION ALONG THOSE PROPERTIES, DO YOU KNOW OFFHAND?

MR. HARRIS-BISHOP: OFFHAND, I KNOW THAT WE HAVE ELEVATED LEVELS OF ARSENIC AND THALLIUM, AND WE ALSO DETECTED IN HERE (INDICATING) SOME ELEVATED LEVELS OF CHROMIUM NEAR THE SURFACE, AND I BELIEVE BENZOPYRENE IS ANOTHER ONE, WHICH IS A PETROLEUM DERIVATIVE THAT I THINK IS A POTENTIAL HUMAN CARCINOGEN. ALL OF THESE WERE FOUND AT RELATIVELY LOW LEVELS, BUT SINCE WE'RE GOING TO BE -- SINCE WE CAN GET TO IT, THAT'S WHY WE WANT TO GET TO IT IF WE CAN, BUT IN THE FEASIBILITY STUDY IT LAYS OUT THE CONTAMINATION THAT WE FOUND AT EACH OF THOSE AREAS. WE DIVIDED THE SITE INTO EIGHT SUBAREAS AND LOOKED AT THEM AND KIND OF CATEGORIZED WHAT CONTAMINATION WE FOUND BASED ON HISTORICAL RECORDS OF THE SITE.

MR. LAZZARETTO: IF I COULD HAVE A FOLLOW-UP QUESTION

OF THAT, RUSTY. ON THOSE PROPERTIES THAT ARE ON THE PERIPHERY BUT NOT MARKED IN PINK, IF I UNDERSTOOD WHAT YOU WERE SAYING EARLIER, THAT THERE MIGHT BE DEED RESTRICTIONS PLACED ON SOME OF THOSE PROPERTIES. HAVE YOU IDENTIFIED WHICH PROPERTIES MIGHT HAVE DEED RESTRICTIONS, FOR EXAMPLE, OR WHAT OTHER KIND OF LAND USE CONTROLS AND HAVE YOU IDENTIFIED WHAT KIND OF LAND USE CONTROLS THAT WOULD GO WITH EACH OF THE PROPERTIES?

MR. HARRIS-BISHOP: NO, WE HAVEN'T. THAT'S SOMETHING THAT WOULD BE PART OF THE DESIGN PHASE IN DESIGNING THE INSTITUTIONAL CONTROLS FOR PROTECTIVENESS BUT STILL ALLOWING SOME FLEXIBILITY. I CAN SAY MOST OF THE PARCELS DO HAVE SOME LEVEL OF CONTAMINATION. SOME OF IT MAY BE DOWN ONLY AT 20 FEET SO THAT WE CAN PRETTY MUCH -- I THINK WE COULD SAY WE'D ALLOW ALMOST UNLIMITED DEVELOPMENT AS LONG AS YOU DON'T DIG DOWN PAST 20 FEET, SO -- BUT WE WOULD BE DOING THAT ON A PARCEL BY PARCEL BASIS DURING THE DESIGN TO HAVE A MORE ACCURATE DEPICTION OF THE CONTAMINATION OF EACH PARCEL.

WHAT WE DID DURING THE REMEDIAL INVESTIGATION IS LOOKED AT IT ON A SITE-WIDE BASIS, BUT THAT IS SOMETHING THAT WE WOULD HAVE TO ADDRESS DURING THE DESIGN.

MR. LAZZARETTO: THANK YOU.

MS. HERRERA: WE HAVE A QUESTION IN THE BACK.

SHE CHANGED HER MIND. DO YOU STILL WANT TO MAKE

A COMMENT?

MR. HARRIS-BISHOP: IN THE BACK?

MS. CAMERENE: HOW MANY PEOPLE IN THE MEDIA KNOW ABOUT THIS MEETING? DID YOU PUBLISH IT IN THE NEWSPAPER?

MR. HARRIS-BISHOP: WE HAVE A MAILING LIST OF OVER 100, I THINK, RIGHT NOW THAT WE MAILED A FACT SHEET OUT TO. WE TOOK OUT ADVERTISEMENTS IN THE NEWSPAPER, AND WE HAVE TWO REPORTERS RIGHT HERE, MICHAEL SPRAGUE FROM THE WHITTIER DAILY NEWS AND PSYCHE PASCUAL FROM THE LOS ANGELES TIMES, AND THEY BOTH WROTE ARTICLES CONCERNING THIS PUBLIC MEETING AND ARTICLES PREVIOUSLY -- I KNOW MIKE HAS WRITTEN SEVERAL ARTICLES ABOUT THE SITE.

MS. CAMERENE: AND THE SECOND THING IS IGNORANCE IS THE BIGGEST ENEMY OF EVERYBODY, AND THIS COMES AS A SURPRISE WHAT IS GOING ON AND HOW TO PUT THE REMEDY, AND IT'S LIKE -- I MEAN THERE'S TOO MANY THINGS IN THE AIR. WHAT IS THE DECISION? IT'S KIND OF CONFUSING. LIKE FATHER GALLAGHER SAYS, LEAVE IT LIKE IT IS OR GET INTO, YOU KNOW, THAT WILL TAKE A YEAR, TWO YEARS, THE EXPOSURE? I DON'T KNOW.

MR. HARRIS-BISHOP: LIKE I SAID, I WANT TO EXPRESS JUST ONE MORE TIME E.P.A. IS GOING TO MAKE SURE THAT WHATEVER WE DO IS PROTECTIVE FIRST OFF. THAT'S OUR GOAL, AND SO ANYTHING THAT WE DO IS GOING TO BE PROTECTIVE. IF WE CAN MAKE CONCESSIONS TO THE PUBLIC TO DO SOMETHING THAT

THEY WOULD LIKE BETTER AND IT'S STILL PROTECTIVE, WE WILL DO THAT, AND IF THE CITY COUNSEL HAS PROVISIONS THAT THEY WOULD LIKE INCLUDED AND THEY'RE STILL PROTECTIVE, WE WILL DO THAT. WE CAN'T GO OUT AND SPEND 100 MILLION DOLLARS TO PAINT THAT PAVEMENT BRIGHT BLUE SO EVERYONE LIKES IT OR BUILD A SOCCER FIELD OR SOMETHING LIKE THAT, BUT WE CAN BE WITHIN REASON TO TAKE INTO ACCOUNT YOUR CONCERNS SO THAT WE ADDRESS THEM APPROPRIATELY.

FATHER GALLAGHER?

FATHER GALLAGHER: THIS IS A COMMENT, AN ADDITIONAL COMMENT; THAT I THINK THAT SOME PEOPLE HAVE INDICATED HERE THIS EVENING THAT THEY'RE A LITTLE BIT CONFUSED. IF YOU WILL NOT TAKE AWAY EVERYTHING THAT IS ON THE PROPERTY RIGHT NOW, WHY WOULD YOU EVER ACCEPT THAT WE WOULD WANT YOU TO DIG IN SOME OF THE AREA THAT YOU CONSIDER CONTAMINATED AND PUT THAT CONTAMINATED SOIL ON TOP OF FIVE FEET OF SOIL THAT IS NOT CONTAMINATED AND THEN GUARANTEE US THAT THAT IS GOING TO BE PROTECTED BY WHATEVER YOU DO WITH IT WHEN YOU'RE USING THE ARGUMENT THAT IT WOULD BE SAFER FOR US TO NOT -- NOT TO TOUCH -- NOT TO MOVE IT FROM THAT AREA AT ALL? SO THAT'S WHY I THINK THAT THERE HAS TO BE A CLARIFICATION ABOUT THE WORD CONTAMINATION BECAUSE I HAVE BEEN LED TO BELIEVE THAT WE'RE USING THE WORD CONTAMINATION, AND THERE IS PROBABLY A POSSIBILITY OF CONTAMINATION ON THAT PIECE OF PROPERTY THAT MIGHT NOT BE

ANY DIFFERENT THAN THE BACK YARD OF SOMEBODY IN SANTA FE SPRINGS IN SOME AREAS OF CONTAMINATION.

MR. HARRIS-BISHOP: WELL, WHAT WE'RE GOING TO BE -- THE MATERIAL THAT WE'D BE EXCAVATING IS AT AN ELEVATED LEVEL. IT'S NOT SOMETHING THAT IS GOING TO POSE A THREAT ONCE IT'S UNDER THAT CAP. WE WOULDN'T EXCAVATE THIS MATERIAL AND PUT IT IN THE MIDDLE AND THEN JUST LEAVE IT THERE. THAT'S WHY WE WANT TO PUT THE CAP DOWN, TO PREVENT ANYONE FROM COMING INTO CONTACT. THAT WOULD BE -- THAT WOULD PREVENT ANY EXPOSURE. THE OTHER ALTERNATIVE THAT WE HAVE WHERE WE EXCAVATE AND THEN CONSOLIDATE THE MATERIAL WITH THE CAP, THAT'S THE GOAL OF THE CAP IS TO PREVENT ANY FUTURE CONTAMINATION. IT'S A PHYSICAL BARRIER TO THE CONTAMINATION. IF WE DON'T DO ANYTHING ABOUT IT, THEN WE RISK SOMEONE COMING ALONG AND EVENTUALLY COMING INTO CONTACT WITH IT AND NOT TAKING THE PRECAUTIONS THAT E.P.A. WILL TAKE WHEN WE DO THE EXCAVATION, SO I MEAN THERE IS -- LIKE I SAID, THERE'S ARSENIC THAT IS THERE THAT'S AT ELEVATED LEVELS. WE HAVE A BACKGROUND LEVEL OF ARSENIC IN THE CITY, IN CALIFORNIA, BUT WE'RE TALKING ABOUT ELEVATED LEVELS FROM THAT THAT WE'VE FOUND HERE.

MARILYN, YOU WANT TO ANSWER THAT?

MS. UNDERWOOD: I JUST WANT TO MAKE A STATEMENT. THE STUFF THAT'S IN THE GROUND IS NOT JUST LIKE YOUR BACK YARD SOIL. E.P.A. DOESN'T GO AROUND CLEANING UP SITES AND

WORRYING ABOUT SITES THAT ARE BACK YARD SOIL, SO IF HE IMPLIED THAT THAT'S TRUE, THAT'S NOT TRUE. THERE'S MORE THAN JUST ARSENIC THERE. THERE'S A NUMBER OF COMPOUNDS THAT EXCEED HEALTH CRITERIA ACCORDING TO THE DEVELOPMENT BY BOTH THE STATE AND FEDERAL AGENCIES ABOUT WHAT IS ACCEPTABLE LEVELS IN SOIL, AND THAT SOMEWHAT IS BASED ON THE FACT THAT OBVIOUSLY IF THIS STUFF WAS ALL AT THE SURFACE, IT WOULD BE MUCH MORE OF A CONCERN TO EVERYBODY HERE, BUT BECAUSE IT'S BURIED, IT'S NOT OBVIOUSLY POSING AN IMMEDIATE CONCERN. THE CONCERN ALSO THEN IS WHILE ALL OF THIS CAN GO DOWN INTO THE GROUNDWATER, MANY OF THESE COMPOUNDS ARE FAIRLY MOBILE. THEY CAN MOVE DOWN INTO THE GROUNDWATER, AND YOU DO GET -- EVENTUALLY IF YOU DON'T WATCH OUT, IT WILL BE ALL THE WAY DOWN IN THE DRINKING WATER SOURCE FOR PEOPLE IN THIS AREA, SO YOU WANT TO STOP THE INFILTRATION INTO THE GROUNDWATER.

THE LAST WAY YOU CAN GET EXPOSED IS THROUGH THE AIR THROUGH THE GASES ESCAPING, AND, AGAIN, YOU WANT TO TRY TO MINIMIZE THAT, AND THEY'RE GOING TO TRY TO MINIMIZE THAT BY PULLING THE GASES OUT IF THERE IS ANY SUBSTANTIAL ACCUMULATION OF THOSE, SO -- BUT TO IMPLY THAT THIS IS A, YOU KNOW -- THIS IS AN INNOCUOUS SITE, YOU DON'T HAVE TO WORRY ABOUT CHEMICALS HERE IS WRONG. IT'S NOT, BUT IT HAPPENS TO BE BURIED. NOW YOU'RE GOING TO TAKE STEPS TO KEEP IT FROM EVER BEING EXPOSED TO PEOPLE, OKAY?

FATHER GALLAGHER: YOU KNOW, LIKE LET'S TAKE THE SCENARIO IT'S BURIED NOW AND THERE'S AN EARTHQUAKE, A SIZEABLE EARTHQUAKE. UNDER THE GROUND RIGHT NOW YOU MIGHT HAVE SOME KIND OF A FISSURE THAT WOULD COME ABOUT AND THAT A CERTAIN AMOUNT OF GROUND UNDERNEATH THE GROUND LEVELS WOULD BE BROKEN UP INTO SOME KIND OF A CAVERN OR SOMETHING ELSE LIKE THAT, BUT THEN YOU'RE SAYING TO ALL THESE PEOPLE WELL, YOU'RE GOING TO PROVIDE THIS PLASTIC SHEET ON TOP OF WHAT IS GOING TO BE ON TOP OF THE GROUND WHERE THE SHAKING MIGHT GO ON AND RIP THAT PLASTIC SHEET, AND THEN WE'RE GOING TO HAVE CONTAMINATED SOIL RIGHT UP THERE NEAR THE TOP OF THE --

MS. UNDERWOOD: RIGHT. I DEFINITELY AS A TOXICOLOGIST WOULD BE CONCERNED ABOUT MAKING IT SAFE FOR SEISMIC ACTIVITY, SO I THINK YOU HAVE A VERY GOOD POINT.

MR. HARRIS-BISHOP: LET ME JUST REITERATE THAT WE'RE NOT JUST GOING TO PAVE THE SITE AND LEAVE. WE'LL BE BACK HERE SAMPLING EVERY YEAR. WE'LL BE LOOKING AT THE INTEGRITY OF THE CAP. I MEAN IF WHITTIER GETS AN EARTHQUAKE, THAT WOULD BE SOMETHING THAT WE'D HAVE TO SAY LET'S GO TAKE A LOOK AT THAT. THE LONG-TERM OPERATION OF MAINTENANCE IS SOMETHING THAT WILL BE CONTINUAL AS LONG AS THIS REMEDY IS IN PLACE, AND WE'LL BE LOOKING AT IT TO MAKE SURE THAT WHATEVER WE DO, YOU KNOW, THE GROUNDWATER IS PROTECTED, THE AIR IS NOT BEING IMPACTED AND THE

CONTAMINATION IS NOT MOVING. THAT'S -- SO EVERY YEAR WE'LL BE -- WE'LL BE DOING SAMPLING, EVERY FIVE YEARS WE'LL BE EVALUATING TO MAKE SURE WE'LL STILL BE PROTECTIVE. THAT'S OUR GOAL.

BROTHER DENNIS?

BROTHER DENNIS: I'VE LIVED IN SANTA FE SPRINGS LIKE FROM 1965 ON, AND I'M AWARE THAT MOST OF THE TIME -- NOT ALL THE TIME -- BUT I'M QUITE AWARE THE CITY HAS SPENT LARGE AMOUNTS OF MONEY ON THE AESTHETICS OF THE CITY AND PUTTING IN SOMETHING -- HOW MANY ACRES OF ASPHALT?

MR. HARRIS-BISHOP: THIS IS ABOUT 18 -- THE WHOLE SITE'S 43, AND I THINK THIS IS ACTUALLY --

BROTHER DENNIS: MY CONCERN IS THAT'S A FAIRLY UGLY LOOKING THING, AND I OBVIOUSLY WOULD BE MORE -- THE GREEN FIELD IS OBVIOUSLY MORE PLEASING TO LOOK AT.

MS. AGUILAR: SPECIFICALLY, CLEANING IT UP, HOW LONG WOULD IT TAKE?

MR. HARRIS-BISHOP: TO -- TO DO ALL THE EXCAVATION? I DIDN'T ACTUALLY GO -- CALCULATE IT AS FAR AS CLEANING IT UP. I COULD TELL YOU THAT WE'D BE TALKING ABOUT ALMOST 750,000 CUBIC YARDS.

MS. AGUILAR: AND WHAT DO YOU DO WITH IT WHEN YOU TAKE IT OUT?

MR. HARRIS-BISHOP: WE'D PUT IT IN THE GROUND SOMEWHERE ELSE. WE WOULD BASICALLY TAKE IT TO A LAND --

MR. MORENO: YOU'RE NOT GOING TO DO THAT.

MR. HARRIS-BISHOP: NO. THAT WAS SOMETHING THAT WE LOOKED AT AND THEN REJECTED BECAUSE OF THE INCREASED RISKS INVOLVED WITH IT AND THE COSTS.

MS. AGUILAR: WHAT DO YOU DO WHEN YOU CLEAN IT UP? WHAT DO YOU DO WHEN YOU CLEAN SOMETHING UP?

MR. HARRIS-BISHOP: WHEN WE CLEAN IT UP.

MS. AGUILAR: RIGHT. REMOVE THE SOIL, THE ENTIRE THING OR --

MR. HARRIS-BISHOP: THAT'S WHAT WE WOULD NEED TO DO HERE BECAUSE WE DON'T HAVE THE TECHNOLOGY IN PLACE THAT COULD CLEAN IT WHILE IT'S DOWN THERE. YOU KNOW, MAYBE IN 100 YEARS WE WOULD HAVE SOMETHING THAT COULD DO THAT.

MR. MORENO: HOW ABOUT THAT BIO REMEDIATION THAT MR. SHARP TALKED ABOUT?

MR. HARRIS-BISHOP: BIO REMEDIATION DOESN'T ADDRESS --

MR. MORENO: OR SOIL FARMING. THERE'S A LOT OF OTHER --

MR. HARRIS-BISHOP: ANYTHING THAT RELIES ON SOME KIND OF BIOLOGICAL ELEMENT, IT WORKS BY HAVING SOMETHING TO FEED ON. THEY'RE NOT GOING TO FEED ON ARSENIC, AND SO BIOLOGICAL ORGANISMS AREN'T GOING TO WORK TO ADDRESS THE CONTAMINATION OF THE SITE. SINCE WE HAVE MULTIPLE CONTAMINATION, THAT'S WHERE WE RAN INTO THE PROBLEM WHERE WE DON'T HAVE ONE EASY THING THAT WE CAN TAKE CARE OF. I

WOULD LOVE TO HAVE SOMETHING THAT WE COULD INJECT INTO THE GROUND AND MAKE THE SITE SAFE, BUT WE DON'T HAVE THAT OPTION RIGHT NOW.

MS. AGUILAR: WHAT WOULD BE ENTAILED TO CLEAN IT? YOU'D TAKE THE SOIL --

MR. HARRIS-BISHOP: WE DIG UP EVERYTHING THAT'S IN THE RESERVOIR, EVERYTHING AROUND THE RESERVOIR THAT'S CONTAMINATED, THE WHOLE SITE. EVERYTHING UNDER THOSE PROPERTIES THAT ALREADY HAVE BUILDINGS AND PARKING LOTS HAVE SOIL THAT WE CONSIDER TO BE CONTAMINATED AS WELL. WE'D HAVE TO REMOVE ALL THAT AND THEN PUT IT INTO TRUCKS AND HAUL IT TO A FACILITY THAT IS PERMITTED TO TAKE ON THAT RISK. WE'D HAVE TO BASICALLY JUST PUT IT INTO A TRUCK, TAKE IT TO A FACILITY WHERE THEY WOULD PUT IT INTO THE GROUND AND ULTIMATELY PUT AN ASPHALT TOP ON IT.

MS. AGUILAR: WHERE WOULD THIS BE?

MR. HARRIS-BISHOP: IT'S IN KETTLEMAN CITY IS ACTUALLY THE HAZARDOUS WASTE FACILITY.

MS. AGUILAR: WHERE?

MR. HARRIS-BISHOP: KETTLEMAN CITY. IT'S IN EASTERN CALIFORNIA.

MR. LAZZARETTO: KERN COUNTY.

MS. AGUILAR: WHAT WOULD THEY DO, TRUCKLOADS FULL?

MR. HARRIS-BISHOP: WE'RE TALKING ABOUT -- A TRUCK HOLDS, I THINK, 15 CUBIC YARDS, A REGULAR DUMP TRUCK, SO

WE'RE TALKING ABOUT SEVERAL THOUSANDS OF THOSE TRUCKS RUNNING THROUGH TO HAUL THIS AWAY. IT WOULD TAKE A VERY LONG TIME.

MS. AGUILAR: AND THEN YOU WOULD REFILL IT?

MR. HARRIS-BISHOP WE WOULD HAVE TO BRING IN A WHOLE LOT OF CLEAN DIRT. THAT'S A LOT OF DIRT THAT WE'D HAVE TO FIND, MAKE SURE THAT THAT'S CLEAN AND THEN PUT IT THERE TO CLEAN UP THE SITE, AND IT'S JUST -- IT WOULD BE A HUGE PROJECT FOR NOT REALLY MINIMIZING THE RISK THAT MUCH. IF THERE WAS SOMETHING THERE THAT WAS CAUSING AN IMMEDIATE HEALTH THREAT AND WE DIDN'T HAVE ANY OTHER CHOICES, THAT'S WHAT WE'D DO.

MS. AGUILAR: HAVE YOU DONE IT IN OTHER SITES HERE IN SANTA FE SPRINGS?

MR. HARRIS-BISHOP: I DON'T THINK SO. I THINK THIS IS THE ONLY FEDERAL SUPERFUND SITE THAT WE HAVE IN SANTA FE SPRINGS.

MS. AGUILAR: THEN THIS IS FUNDED BY THE FEDERAL GOVERNMENT.

MR. HARRIS-BISHOP: SO FAR IT HAS BEEN. WHAT WE ULTIMATELY -- OUR GOAL IS TO HAVE THE PEOPLE WHO ARE RESPONSIBLE FOR THE CONTAMINATION, MAINLY THE GENERATORS WHO GENERATED THE WASTE AND PUT IT THERE -- WE'D LIKE TO HAVE THEM PAY FOR IT, AND THAT'S THE GOAL OF THE AGENCY IN THE LONG TERM. IF WE END UP PAYING FOR THE WHOLE SITE UP

FRONT, WE'LL GO AFTER THEM ONCE WE'VE COMPLETED IT. WE'LL ASK THEM TO PAY US BACK.

MR. MORENO: ARE THEY OIL COMPANIES?

MR. HARRIS-BISHOP: OIL COMPANIES ARE INVOLVED AND SOME OTHER COMPANIES THAT HAD -- THAT HAD GENERATED WASTE, AND THEY DISPOSED OF IT IN THERE.

MS. AGUILAR: SO THEN SOMEBODY WHERE YOU PUT ALL THIS STUFF OVER THERE BUILDS A SCHOOL AND BUILDS A TOWN ALL AROUND IT, AND IT STARTS ALL OVER AGAIN, HUH?

MR. HARRIS-BISHOP: THAT'S ALREADY A PERMITTED FACILITY, SO THEY WOULD HAVE CONTROLS ALREADY IN PLACE, SO WE WOULDN'T HAVE THIS SITUATION AGAIN.

MS. AGUILAR: EXCUSE ME, BUT HAVE YOU TESTED -- HAS THE FIELD AT ST. PAUL'S BEEN TESTED?

MR. HARRIS-BISHOP: HMM-HMM. WE PUT IN, I THINK, EIGHT SOIL BORINGS ON THE FOOTBALL FIELD. I THINK FATHER GALLAGHER KNOWS WE KIND OF PUNCHED SOME HOLES AND WENT DOWN QUITE DEEP AND FOUND THAT WE DON'T HAVE THE SAME KINDS OF CONTAMINATION THAT WE HAVE ON THE SITE. WE CONSIDER THOSE TO BE BACKGROUND SOIL LEVELS, AND THEY'RE, YOU KNOW, FAIRLY CONSISTENT WITH WHAT WE KNOW IN THE SURROUNDING AREA, SO IT DOESN'T LOOK LIKE THE ACTIVITY THAT OCCURRED AT WASTE DISPOSAL EVER IMPACTED THE HIGH SCHOOL PROPERTY EVEN BEFORE THE HIGH SCHOOL WAS THERE, SO -- BUT WE DID LOOK, AND WE HAVE -- AND WE ARE MONITORING THE GROUNDWATER ALSO.

MR. MORENO: DOES IT STOP AT THE BOUNDARY, THE SOIL CONTAMINATION?

MR. HARRIS-BISHOP: PRETTY MUCH.

MS. HERRERA: WE'RE DEFINITELY RUNNING OUT OF TIME. WE ONLY HAVE A COUPLE OF MINUTES LEFT. I WOULD LIKE TO INVITE ANYBODY WHO HAS A COMMENT TO GO AHEAD AND STATE IT.

FATHER GALLAGHER: ONE COMMENT, AND IT WOULD BE A VERY BRIEF ONE, IS THAT I'D LIKE TO REITERATE THAT THE POSITION OF THE SCHOOL IS THAT WE'D BE VERY RELUCTANT TO HAVE ANY BUSINESS UP ABOVE THE LEVEL OF THE SCHOOL YARD WHERE WE WOULD HAVE TO BE CONCERNED ABOUT THE SAFETY OF THE STUDENTS AND ALWAYS BE WONDERING WELL, WHO WAS GOING TO BE LOOKING DOWN ON THEM SINCE -- SINCE THE FIELD IS USED FOR A LOT OF DIFFERENT ACTIVITIES, SO THIS IS A DIFFERENT SAFETY, SO I WOULD HOPE THAT THE E.P.A. WOULD ALSO ALLOW FOR THAT IF THEY'RE GOING TO BE MAKING SOME KIND OF IMPROVEMENTS IN THE AREA.

MR. HARRIS-BISHOP: THANK YOU.

ARE THERE ANY OTHER COMMENTS?

MS. HERRERA: ANY OTHER COMMENTS?

MR. HARRIS-BISHOP: I'LL BE HERE -- GO AHEAD.

MS. HERRERA: WE WOULD LIKE TO CLOSE THE MEETING BECAUSE WE HAVE TO LEAVE BY NINE O'CLOCK, BUT I WANT TO THANK YOU ALL FOR ATTENDING OUR MEETING ONCE AGAIN, AND ALSO I WANT TO REMIND YOU THAT WE STILL ARE DURING THE

PUBLIC COMMENT PERIOD, SO IF YOU DIDN'T GET A CHANCE TO SUBMIT YOUR COMMENT TONIGHT OR YOU NEED SOME MORE TIME TO THINK ABOUT IT, YOU CAN ALWAYS SEND YOUR COMMENTS BEFORE SEPTEMBER 12, AND OUR ADDRESS IS IN THE BACK OF THE FACT SHEET, AND I HOPE YOU ALL GET A CHANCE TO PICK UP ONE IF YOU DID NOT RECEIVE ONE IN THE MAIL.

MR. SHARP: HOW WILL YOU NOTIFY THE COMMUNITY OF THE E.P.A.'S DECISION?

MS. HERRERA: WE WILL SEND A FACT SHEET TO EVERYBODY'S HOME.

MR. SHARP: TO ONLY THOSE PEOPLE WHO HAVE REGISTERED THEIR ADDRESSES WITH E.P.A.?

MS. HERRERA: WELL --

MR. SHARP: OR WILL YOU MAKE A GENERAL MAILING OF THE ENTIRE WHITTIER, SOUTH WHITTIER, SANTA FE SPRINGS AND THE ADJACENT COMMUNITIES?

MS. HERRERA: WE HAVE A MAILING LIST OF 100 -- WE HAVE 100 NAMES IN THE MAILING LIST, AND ALSO OUR FACT SHEETS ALSO HAVE A COUPON ON THEM THAT THEY CAN RETURN TO US, AND WE KEEP UPDATING OUR MAILING LIST WITH THE NEW ADDRESSES AND NEW NAMES THAT WE RECEIVE, AND IF YOU HAVE ANY SUGGESTIONS FOR US OF HOW TO IMPROVE OUR MAILING, I'LL BE GLAD TO TAKE THEM.

MR. HARRIS-BISHOP: WE ALSO DO -- I THINK WE'LL DO A PRESS RELEASE AT THAT TIME ALSO TO LET EVERYONE KNOW THAT

WE HAVE MADE THAT DECISION AND WHAT THAT DECISION IS.

MS. HERRERA: AND ALSO WE PUT AN AD IN THE NEWSPAPER.

MR. HARRIS-BISHOP: AND THEN THE DECISION DOCUMENT WILL BE AVAILABLE IN THE LIBRARY FOR ANYONE TO COME IN AND LOOK AT.

MR. SHARP: THERE WON'T BE A FURTHER PUBLIC MEETING TO IDENTIFY WHAT THAT IS TO THE PUBLIC.

MR. HARRIS-BISHOP: NO, NOT UNTIL WE'VE -- ONCE WE'VE FINISHED THE PUBLIC COMMENT PERIOD, WHICH GOES ON FOR ANOTHER WEEK AND A HALF, THEN THAT'S WHEN WE, YOU KNOW, STOP AND DEVELOP OUR DECISION DOCUMENT, AND THEN WE COME OUT AND TELL EVERYONE WHAT THE DECISION IS AND THEN GO FORWARD WITH DESIGN, AND THEN WE HAVE MORE OPPORTUNITIES FOR PUBLIC COMMENT AT THAT TIME.

MS. MORENO: WHEN WERE YOU HAVING YOUR NEXT COMMENT MEETING?

MR. HARRIS-BISHOP: I DON'T KNOW YET EXACTLY. IT WILL BE NEAR THE BEGINNING OF THE DESIGN PHASE, SO I'M HOPING SOMETIME IN THE BEGINNING OF THE NEXT YEAR, MARCH.

MS. MORENO: I'M TALKING ABOUT THE COMMENT PHASE OF THIS PLAN, THIS PROGRAM. BETWEEN -- BETWEEN AUGUST 12TH AND SEPTEMBER 12TH?

MR. HARRIS-BISHOP: AND SEPTEMBER 12TH, YEAH. THAT'S THE PUBLIC COMMENT PERIOD FOR MAKING THE DECISION.

MS. MORENO: ARE YOU GOING TO HAVE ANOTHER MEETING

SUCH AS THIS?

MR. HARRIS-BISHOP: NO, THIS IS THE ONLY ONE WE HAVE UNLESS -- THE ONLY THING I CAN OFFER IS IF THERE'S A COMMUNITY GROUP THAT WOULD LIKE ME TO MAKE THIS PRESENTATION AGAIN, I CAN PROBABLY COME BACK DOWN BEFORE THE END OF THE PUBLIC COMMENT PERIOD TO DO THAT.

MR. OPALSKI: WE NEED TO KNOW QUICKLY THOUGH.

MR. HARRIS-BISHOP: WE NEED TO KNOW BECAUSE IT'S BECOMING THE END OF THE FISCAL YEAR, AND WE WOULD HAVE TO MAKE SURE WE HAVE THE MONEY TO DO THAT. IT'S POSSIBLE IF WE HAVE ENOUGH INTEREST, WE COULD DO THAT AGAIN. I'M ALWAYS WILLING TO TALK ON THE PHONE OR YOU CAN CALL -- WE HAVE A TOLL FREE NUMBER THAT YOU CAN LEAVE A MESSAGE, AND THEN I CAN CALL YOU BACK.

I WANT TO STRESS THAT FOR OFFICIAL COMMENTS, WE NEED TO HAVE THEM EITHER RECORDED BY THE COURT REPORTER OR IN WRITING, AND THEN WE WILL BE ADDRESSING THEM ALL DURING THAT RECORD OF DECISION DOCUMENT, AND WE'LL BE INCORPORATING ALL YOUR LETTERS AND THEN HOW WE RESPONDED TO THEM.

MR. OPALSKI: LET ME CLARIFY FOR TONIGHT'S MEETING BECAUSE THERE WAS THIS SORT OF BRINGING TOGETHER OF QUESTIONS AND ANSWERS AND COMMENTS, AND WE'RE GOING TO BE DOING OUR BEST AT LOOKING AT THE TRANSCRIPT AND GLEANING OUT EVERYTHING, QUESTIONS AND COMMENTS AND WHATEVER, SO

THAT WE'LL BE RESPONDING TO ALL THE SIGNIFICANT COMMENTS, WHETHER THEY WERE PUT IN A QUESTION FORM OR COMMENT FORM, IN THE RESPONSIVENESS SUMMARY, SO DON'T -- WE'RE MORE HUNG UP WITH THEM THAN YOU ARE, SO JUST SO YOU KNOW, THAT'S HOW WE'RE GOING TO HANDLE IT.

MR. HARRIS-BISHOP: AND I WANT TO ENCOURAGE YOU ALL IF YOU DO THINK OF SOMETHING, YOU KNOW, TO WRITE IT DOWN, TO SEND IT TO ME, AND I REALLY APPRECIATE IT. THANK YOU ALL FOR COMING AND LISTENING. IF YOU HAVE ANY OTHER QUESTIONS OR IF YOU KNOW ANYONE ELSE WHO WOULD LIKE TO GET IN ON OUR MAILING LIST, PLEASE LET US KNOW AND GIVE THEM A FACT SHEET SO THEY CAN COME ON OUR MAILING LIST. THANK YOU.

(WHEREUPON THE MEETING WAS CONCLUDED AT 9:00 P.M.)

--

CERTIFICATION

I, KAREN M. KLEIN, CERTIFIED SHORTHAND REPORTER NO. 5368, DO HEREBY CERTIFY THAT THE WITHIN TRANSCRIPT OF PROCEEDINGS WAS TAKEN DOWN BY ME IN SHORTHAND AT THE TIME AND PLACE THEREIN SET FORTH AND WAS THEREAFTER TRANSCRIBED INTO TYPEWRITING UNDER MY SUPERVISION AND DIRECTION.

I FURTHER CERTIFY THAT THE FOREGOING 90 PAGES CONTAIN A TRUE AND CORRECT TRANSCRIPTION OF MY SHORTHAND NOTES SO TAKEN.

I FURTHER CERTIFY THAT I AM NEITHER COUNSEL FOR NOR RELATED TO ANY PARTY TO SAID ACTION NOR IN ANYWISE INTERESTED IN THE RESULT OR OUTCOME THEREOF.

WITNESS MY HAND THIS 6TH DAY OF SEPTEMBER, 1993.

KAREN M. KLEIN, CSR NO. 5368, CM

STATE OF CALIFORNIA)
)
COUNTY OF LOS ANGELES)

I, KAREN M. KLEIN, CERTIFIED SHORTHAND REPORTER NO. 5368, HEREBY CERTIFY THAT THE ATTACHED TRANSCRIPT OF PROCEEDINGS IS A CORRECT COPY OF THE ORIGINAL TRANSCRIPT OF PROCEEDINGS TAKEN BEFORE ME ON SEPTEMBER 1, 1993, AS AS THEREON STATED.

I DECLARE UNDER PENALTY OF PERJURY THAT THE FOREGOING IS TRUE AND CORRECT.

EXECUTED AT HACIENDA HEIGHTS, CALIFORNIA, THIS 6TH DAY OF SEPTEMBER, 1993.

Karen M. Klein

KAREN M. KLEIN, CSR NO. 5368, CM

Karen M. Klein, CSR 5368, CM

ERRATA SHEET

PAGE	LINE	CORRECTION
15	3	"Did" should be "Didn't"
22	21	"Need" should be "Meet"
25	20	"Amd" should be "And"
31	25	"Soil" should be "Asphalt"
44	24	"mounted" should be "mounded"
45	2 3	"Santa Fe Spaces" should be "St. Paul"
46	2	"Expense" should be "expensive"
63	19	"Store" should be "door"
67	3	"Assume" should be "As soon"
67	23	Remove "7" at end of line

ATTACHMENT 2

AMENDED SCOPE OF WORK
FOR REMEDIAL DESIGN

March 1997

AMENDED SCOPE OF WORK

FOR THE WASTE DISPOSAL, INC. SUPERFUND SITE

SOIL AND SUBSURFACE GAS OPERABLE UNIT

SANTA FE SPRINGS, CALIFORNIA

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I. INTRODUCTION

The following Amended Scope of Work ("Amended SOW") for the Amended Administrative Order for Remedial Design and Other Response Actions ("Amended Order") outlines the remedial design work to be performed by the Respondents for the Soil and Subsurface Gas Operable Unit (OU) at the Waste Disposal, Inc. (WDI) Superfund Site in Santa Fe Springs, Los Angeles County, California ("the Site"). The Amended SOW describes work contained in the Unilateral Administrative Order for Remedial Design, dated August 18, 1994 ("Original Order") and in the Amended Order.

New remedial design (RD) investigative activities and other response actions are to be included in a RD Investigative Activities Workplan (RD-27). Upon EPA approval of this Workplan, the Respondents shall conduct the activities. To distinguish these new RD investigative and response activities from the activities included in the Original Order, a new Task 3 has been added to this Amended SOW. In addition to these new activities under Task 3, all deliverables not completed or only partially completed under the Original Order, shall be completed by the Respondents under the Amended Order. These deliverables shall be completed in accordance with the Schedule and List of Deliverables, Attachment 3, to the Amended Order. All items of work already completed under the Original Order are set forth in Section IX of the Amended Order and in Attachment 3 to the Amended Order.

It is not the intent of this document to provide task specific engineering or geological guidance. The RD activities will be further detailed in workplans, technical memoranda, and other documents to be submitted by the Respondents for approval as set forth in the Amended Order and this Amended SOW.

II. OVERVIEW OF THE REMEDY

THE OBJECTIVES OF THE REMEDY ARE TO:

- Eliminate or reduce the risks to human health associated with direct contact with hazardous substances, pollutants, or contaminants within the Site;
- Eliminate or minimize the threat posed to human health and the environment from current and potential migration of hazardous substances in the groundwater and subsurface and surface soil and rock at the Site;
- Eliminate or reduce the risks to human health from inhalation of hazardous substances, pollutants or contaminants from the Site or at the Site; and
- Reduce the volume, toxicity, and mobility of hazardous substance, pollutants, or contaminants at the Site.

III. REMEDY COMPONENTS

A. Contaminated Soil

1. General Background

The soils with the highest concentrations of contamination are located within the reservoir and the reservoir area. The December 1993 Record of Decision (ROD) remedy states that a RCRA-equivalent, impermeable cap will be constructed over the reservoir and designated areas. Additionally, because contaminated soils were identified in other areas of the Site (e.g., Area 4 and Area 7), the ROD states that contaminated soil from some of these areas will be excavated. More recent studies conducted in 1995 by the Respondents to the Original Order indicate that it may be feasible for the soils to remain in place. Additional soil characterization work is needed during the RD investigative phase to more fully characterize certain areas and to determine if contaminated soils are contributing to the migration of subsurface gases. Final recommendations on whether soils need to be excavated in areas outside of the reservoir area will be included in the Final RD Investigative Summary Report/Alternatives Analysis for Subsurface Gas and Soils (RD-31) and the revised Pre-Final (90%) Design (RD-18).

2. Performance Standards for Soils

The RD shall be prepared so that the Remedial Action (RA) will meet all Performance Standards, as defined in Section VI of the Amended Order, including, but not limited to, the following:

a. Excavation Standards for Contaminated Soils

In the event that Areas 4 and 7 or any other areas of the Site are excavated, soils, sludges, and related sump materials shall be performed in the following manner. Excavation shall be conducted in a controlled manner and consolidated under the existing soil cap located on Area 2, above the Reservoir. Dust suppression techniques shall be employed, to the greatest extent possible, to prevent dust and debris from leaving the Site.

b. Soil Cleanup Standards for Areas Requiring Excavation

Contaminated soils at the Site requiring excavation shall be removed if the soils exceed the cleanup standards in the 1993 ROD. Analytical testing methods approved by EPA shall be used. The soils remaining in these areas after excavation shall not exceed the below listed ROD cleanup standards:

Arsenic	10.0 mg/kg
Beryllium	0.41 mg/kg
Chromium	44 mg/kg
Cadmium	39 mg/kg
Lead	500 mg/kg
Thallium	12.0 mg/kg
Benzene	2.7 mg/kg
Dieldrin	0.11 mg/kg
DDT, DDE, DDD	5 mg/kg
cPAHs	0.23 mg/kg
PCBs	0.22 mg/kg

c. Impermeability Standards for Cap Over Contaminated Soils

The multi-layered cap to be placed over the reservoir and the necessary surrounding area in Area 2 shall meet a permeability standard of 10^{-7} cm/sec. The surface configuration of the installed cap shall be determined during the RD. The design of the cap shall meet all Performance Standards identified in the ROD.

B. Subsurface Gas

1. General Background

The 1993 ROD states that monitoring of gases that emanate from the Site will be conducted and that an extraction and treatment system will be installed, if required by the constituents and volume of gases. Recent evaluations of the subsurface gas data in 1996 indicate that an active extraction system may be needed to manage the subsurface gases underneath the RCRA-equivalent cap over the reservoir area. Separate soil vapor extraction (SVE) systems may be needed to control subsurface gases in the vicinity of on-site buildings in other areas outside the reservoir area. Treatability studies on various technologies for controlling gases, including SVE systems, need to be conducted during the remainder of the RD investigative phase. Additional studies also need to be conducted to more fully characterize the nature and extent of the subsurface gases within the site, including the reservoir area, and if necessary, off-site.

2. Performance Standards for Subsurface Gases

The RD shall be prepared so that the RA will meet all Performance Standards, as defined in Section VI of the Amended Order, including, but not limited to, the following:

a. Interim action levels for vinyl chloride and benzene established in EPA's Interim Response Action Plan, dated March 20, 1997, which is Attachment 2.A to this Amended SOW; and the

b. Standards for methane established by the California Integrated Waste Management Board (CIWMB).

3. Subsurface Gas Characterization and Monitoring

The RD shall be prepared so that the RA will control or manage subsurface gases emanating from the Site from within the reservoir and the reservoir area and emanating from other areas of the Site to protect public health. The source of the gas, the rate of gas generation, and the projected life of gas generation is not known for these areas. Respondents shall conduct additional RD investigative studies to more fully characterize the nature and extent of the subsurface gases within the site, and if necessary, off-site. Based on the results of these investigative studies, any necessary changes to the design shall be incorporated in the revised Pre-final (90%) Design (RD-18) plans and specifications. If the revised design includes active gas collection systems, including flaring or other treatment systems, the corresponding permit requirements both for the design and for monitoring shall be identified and discussed in the permitting strategy in the revised Pre-final (90%) RD Design (RD-18). To the extent practicable, Respondents shall consider the placement of the investigative wells and probes in relation to the future placement of the compliance monitoring system for meeting Performance Standards

4. Indoor Air Monitoring

The RD shall be prepared so that the RA will control or manage subsurface gases in areas adjacent to on-site buildings to protect public health. Because methane and volatile organic compounds (e.g., vinyl chloride and benzene) have been identified in the subsurface gases adjacent to on-site buildings, additional subsurface gas monitoring and, if needed, indoor air monitoring may be needed. A Subsurface Gas Contingency Plan (RD-28) shall be prepared, in coordination with State and local agencies, for conducting, if necessary, on-site building monitoring activities. If requested by Respondents or at EPA's discretion, EPA may assume federal-lead for this task or any portions thereof.

C. Groundwater Characterization and Monitoring

The RD shall be prepared so that the RA will ensure that rainwater will not leach through contaminated soils causing or contributing to groundwater contamination and to ensure that subsurface gases will not present a hazard to the groundwater. Respondents shall conduct quarterly groundwater monitoring, according to a Comprehensive Groundwater Quarterly Monitoring Plan (RD-30). Monitoring shall commence during this RD investigative phase and continue throughout the RA and the Operation and Maintenance (O&M) phase of the project. An analysis shall be made of the groundwater data, including an analysis of the effect on the groundwater of capping the reservoir, and a feasibility study of whether any additional RA activities are

needed to protect the groundwater. Respondents also shall conduct groundwater characterization activities as described in Task 3, B. Respondents shall submit this analysis in a Final Groundwater Investigative Summary Report/Feasibility Study (RD-32).

IV. PLANNING AND DELIVERABLES

The work to be performed under this Amended SOW ("the Work") shall be documented by Respondents in workplans, technical memoranda, reports, or other documents, as requested by EPA. Plans, specifications, submittals, and other deliverables shall be subject to EPA review, in accordance with Section XII of the Amended Order. Reports and documents submitted to EPA shall be printed on recycled paper (at least 25% post-consumer content), double-sided, and contained in 3-ring binders so that pages are easily updated and replaced. Documents requiring modifications or updates will have only those changed pages resubmitted. Drawings shall be folded to 8.5" x 11" so that they fit inside file folders and binders. Selected submittals shall also be provided in electronic format, compatible with EPA data systems.

Deliverables required under the Amended Order and this Amended SOW, including Monthly Progress Reports, shall be provided in paper copy to EPA's Project Manager, Andria Benner, at the address shown in Section XVI of the Amended Order. The Progress Reports shall be completed monthly and shall include a monthly-updated compliance schedule for activities required under the Amended Order and this Amended SOW.

Respondents shall submit a revised Quality Assurance Project Plan (QAPP) (RD-25), describing the data collection activities and the proposed Data Quality Objectives (DQOs), and a revised Field Sampling Analysis Plan (FSAP) (RD-26) for this RD investigative phase. If additional data needs to be collected in the future, the Respondents shall revise the QAPP and the FSAP accordingly, whenever such requirements are identified. Respondents are responsible for fulfilling additional data and analysis needs identified by EPA during the RD consistent with the general scope and objectives of the Amended Order and this Amended SOW. Respondents shall perform the following tasks:

TASK 1 - PROJECT PLANNING

A. Site Background

The activities under Task 1 were performed under the Original Order, as set forth in Section IX of the Amended Order and in Attachment 3, Schedule and List of Deliverables. To the extent these activities were not completed, Respondents shall conduct the following project planning activities, as follows:

1. Existing Data and Additional Data Requirements

All existing Site data shall be thoroughly compiled and reviewed by Respondents. Specifically, this shall include the ROD, RI/FS, the RD reports submitted to date, and other available data related to the Site. For the

purposes of managing this data, Respondents shall prepare a Data Acquisition and Management Plan (RD-10) for submittal to and approval by EPA. All Site data shall be utilized by the Respondents in formulating recommendations for additional data needed for completion of the RD. Final decisions on the necessary data and DQOs shall be made by EPA.

2. Conducting Site Visit

Respondents shall conduct a visit to the Site with the EPA Project Manager (RPM) during the project planning phase to assist in developing a conceptual understanding of the RD investigative requirements for the Site. Information gathered during this visit shall be utilized by Respondents to plan the project and determine the extent of the additional data necessary to conduct the RD investigative activities and to complete the RD.

B. Project Planning

Once Respondents have collected and analyzed existing data and conducted a visit to the Site, the specific project scope of this RD investigative phase and the completion of the RD shall be planned. Respondents shall meet with EPA regarding the following activities before proceeding with Task 3 and before completing the deliverables required under Task 2 of this Amended SOW.

TASK 2 - REMEDIAL DESIGN (RD)

The RD shall provide the technical details for implementation of the RA, in accordance with currently accepted environmental protection technologies and standard professional engineering and construction practices. The design shall include clear and comprehensive design plans and specifications. Some of the activities under Task 2 were performed under the Original Order, as set forth in Section IX of the Amended Order and in Attachment 3, Schedule and List of Deliverables. To the extent these activities were not completed, Respondents shall conduct the following remedial design activities:

A. Remedial Design Planning

Respondents shall submit to EPA an RD Work Plan (RD-5), a Sampling and Analysis Plan (SAP) (RD-6), and a Health and Safety Plan (HASP) (RD-11). All plans must be reviewed by EPA prior to the initiation of field activities, with EPA approval required for the RD Work Plan and the SAP, and with EPA comments provided on the HASP.

Upon approval of the RD Work Plan, Respondents shall implement the RD Work Plan (RD-5), in accordance with the design management schedule contained therein. Plans, specifications, submittals, and other deliverables shall be subject to EPA review and approval in accordance with Section XII of the Amended Order. Review and/or approval of design submittals only allows Respondents to proceed to the next step of the design process. It does not imply acceptance of later design submittals that have not been reviewed, nor that the remedy, when constructed, will meet Performance Standards.

1. RD Work Plan (RD-5)

Respondents shall submit a RD Work Plan (RD-5) to EPA for review and approval. The Workplan (RD-5) shall be developed in conjunction with the Sampling and Analysis Plan (RD-6), the Health and Safety Plan (RD-11), and the Treatability Study Work Plan (RD-9), although each plan may be delivered under separate cover. The Work Plan shall include a comprehensive description and itemization of the additional data collection and evaluation activities to be performed and the plans and specifications to be prepared. A comprehensive design management schedule for completion of each major activity and submission of each deliverable also shall be included. Specifically, the Workplan shall include the following:

a. A background summary setting forth the following:

1) A description of the Site including the geographic location and the physiographic, hydrologic, geologic, demographic, ecological, and natural resource features;

2) A synopsis of the history of the Site including a summary of past disposal practices and a description of previous responses that have been conducted by local, State, Federal, or private parties;

3) A summary of the existing data including physical and chemical characteristics of the contaminants identified and their distribution among the environmental media at the Site.

b. A statement of the problem(s) and potential problem(s) posed by the Site and the objectives of the RD and RA.

c. A detailed description of the subtasks to be performed, information needed for each subtask, information to be produced during and at the conclusion of each subtask, and a description of the work products that shall be submitted to EPA. This description shall include the deliverables set forth in the remainder of Task 2.

d. A schedule for completion of each required activity and submission of each deliverable required by the Amended Order and this Amended

SOW. This schedule shall also include information regarding timing, initiation, and completion of all critical path milestones for each activity or deliverable.

2. Other Elements of RD Workplan

The RD Work Plan also shall contain the following documents or elements:

a. Data Acquisition and Management Plan (DAMP) (RD-10)

Respondents shall prepare a project management plan, including a Data Acquisition and Management Plan (DAMP) (RD-10). The DAMP shall include provisions for submittal of progress reports to EPA and for conducting meetings, including presentations to EPA, at the conclusion of each major phase of the RD. The DAMP shall address the requirements for project management systems, including tracking, sorting, and retrieving the data along with an identification of the software to be used, minimum data requirements, data format, and backup data management. The DAMP shall address both document control and data management for all activities conducted during the RD.

b. Sampling and Analysis Plan (SAP) (RD-6)

Respondents shall prepare a Sampling and Analysis Plan (SAP) (RD-6) to ensure that sample collection and analytical activities are conducted in accordance with technically acceptable protocols and that the data generated will meet the DQOs established. The SAP shall include a Field Sampling and Analysis Plan (FSAP) and a Quality Assurance Project Plan (QAPP). See References for appropriate guidance.

1) Field Sampling and Analysis Plan (FSAP)

The FSAP shall define in detail the sampling and data-gathering methods that shall be used on the project. It shall include sampling objectives, sample location (horizontal and vertical) and frequency, sampling equipment and procedures, and sample handling and analysis. The FSAP shall be written so that a field sampling team unfamiliar with the Site would be able to gather the required samples and field information.

2) Quality Assurance Project Plan (QAPP) (RD-8)

The QAPP shall describe the project objectives and organization, functional activities, and quality assurance and quality control (QA/QC) protocols that shall be used to achieve the desired DQOs. The DQOs shall, at a minimum, reflect use of analytical methods for obtaining data of sufficient quality to meet National

Contingency Plan requirements as identified at 40 CFR Section 300.435(b). In addition, the QAPP shall address personnel qualifications, sampling procedures, sample custody, analytical procedures, and data reduction, validation, and reporting. These procedures must be consistent with the Region 9 Engineering Support Branch Standard Operating Procedures and Quality Assurance Manual and the guidance specified in Section XIV of the Administrative Order.

Respondents shall demonstrate in advance and to the satisfaction of EPA that each laboratory that the Respondents plan to use is qualified to conduct the proposed work and meets the requirements specified in Section XIV of this Amended Order. EPA may require that Respondents submit detailed information to demonstrate that the Respondents' laboratory is qualified to conduct the work, including information on personnel qualifications, equipment and material specification, and laboratory analyses of performance samples (blank and/or spike samples).

c. Health and Safety Plan (RD-11) Under Original Order

A Site Health and Safety Plan (H&SP) shall be prepared in conformance with Respondents' health and safety program and in compliance with OSHA regulations and protocols. The H&SP shall include a health and safety risk analysis, a description of monitoring and personal protective equipment, medical monitoring, and provisions for site control. EPA will not approve Respondents' H&SP, but rather EPA will review it to ensure that all necessary elements are included and that the plan provides for the protection of human health and the environment.

d. Community Involvement

EPA committed to increased community involvement during the RD, including community meetings at various stages during the RD process and at the conclusion of the RD investigative activities phase prior to completion of the Final (100%) Design (RD-19). Respondents shall cooperate with EPA in conducting these community meetings, including the content, scope, frequency, and number, based on community input. At EPA's request, Respondents shall assist EPA in preparing and disseminating information to the public regarding the RD activities.

e. Future Use

The selected remedy in the ROD requires institutional controls so that future use of the Site is compatible with remedial goals. A number of redevelopment alternatives are possible. Future use of the Site needs

to be compatible with meeting Performance Standards for controlling subsurface gases and with maintaining the integrity of the cap over the reservoir area. Future use shall be considered during the RD and, if feasible, shall be incorporated into the final design. Selection of institutional controls for restricting the future use of the Site will be determined by EPA, in consultation with the City of Santa Fe Springs, the community, and other interested parties.

B. Preliminary (30%) Design (RD-16) and Intermediate (60%) Design (RD-17)

Under the Original Order, Preliminary (30%) Design (RD-16) and Intermediate (60%) Design (RD-17) were combined to include both phases of activity, under one deliverable, entitled a "Predesign and Intermediate (60%) Design Report."

1. Preliminary Design (30%) Design (RD-16) Under Original Order

Preliminary (30%) Design (RD-16) shall begin with initial design and end with the completion of approximately 30 percent of the design effort. Preliminary (30%) Design shall include field verification of Site conditions. The technical requirements of the RA shall be addressed and outlined so that they may be reviewed to determine if the final design will provide an effective remedy. Supporting data and documentation shall be provided with the design documents defining the functional aspects of the project. In accordance with the design management schedule established in the RD Work Plan, Respondents shall submit to EPA the Preliminary (30%) Design submittal which shall consist of the following:

a. Surveying, Easements and Other Data Acquisition Activities

Data gathered during the project planning phase shall be compiled, summarized, and submitted along with an analysis of the effect of the results on design activities. In addition, surveys conducted to establish topography, rights-of-way, easements, and utility lines shall be documented. Utility requirements and acquisition of access, through purchases or easements, that are necessary to implement the RA shall also be discussed.

b. Design Criteria Summary

The concepts supporting the technical aspects of the design shall be defined in detail and presented in the Preliminary Design Report. Specifically, the Design Report shall include the preliminary design assumptions and parameters, including:

1) Waste characterization
2) Pretreatment requirements
3) Volume of each media requiring treatment

4) Treatment schemes (including all media and by-products)
5) Input/output rates
6) Influent and effluent qualities
7) Materials and equipment
8) Performance Standards
9) Long-term monitoring requirements

c. Preliminary Plans and Specifications

Respondents shall submit an outline of the required drawings, including preliminary sketches and layouts, describing conceptual aspects of the design, unit processes, etc. In addition, a list of the required specifications and a table of contents of each specification, including Performance Standards, shall be submitted. Construction drawings shall reflect organization and clarity, and the scope of the technical specifications shall be outlined in a manner reflecting the final specifications. Respondents shall satisfy EPA that the concept of the design, including the ROD criteria and Applicable or Relevant and Appropriate Requirements (ARARs), is being correctly translated into engineering parameters.

d. Preliminary Permitting Strategy

All activities must be performed in accordance with the requirements of all federal and state laws and regulations. Any off-site disposal shall be in compliance with the policies stated in the Procedure for Planning and Implementing Off-site Response Actions (Federal Register, Volume 50, Number 214, November, 1985, pages 45933 - 45937) and Federal Register, Volume 55, Number 46, March 8, 1990, page 8840, and the National Contingency Plan, 40 CFR Section 300.440. The strategy shall identify the off-site disposal/discharge permits that are required, the time required to process the permit applications, and a schedule for submittal of the permit applications. The final design plans and specifications must be consistent with the technical requirements of all applicable or relevant and appropriate federal and state environmental regulations unless a waiver has been issued.

2. Intermediate (60%) Design (RD-17) Under Original Order

Intermediate (60%) Design (RD-17) shall begin with completion of the Preliminary (30%) Design (RD-16) and end with the completion of approximately 60 percent of the design effort. (Under the Original Order the Respondents combined the Preliminary (30%) Design and the Intermediate (60%) Design into one submittal, the "Predesign and Intermediate (60%) Design Report.") The following elements shall be covered in the 60% design, including modifications by any value engineering recommendations adopted by the Respondents. A value engineering analysis is not required by EPA, and will

be conducted only at Respondents' discretion. Any value engineering recommendations adopted by Respondents shall be summarized in a report submitted with the Intermediate (60%) Design. EPA comments on the Intermediate (60%) Design shall be reflected in the Pre-Final (90%) Design (RD-18) and the Final (100%) Design (RD-19). The Intermediate (60%) Design submittal shall be submitted in accordance with the approved design management schedule and shall consist of the following:

a. Draft Design Analyses

The evaluations conducted to select the design approach shall be described. Design calculations shall be included.

b. Draft Plans and Specifications

Draft construction drawings and specifications for all components of the RA shall be prepared and presented.

c. Draft Construction Schedule

Respondents shall develop a Draft Construction Schedule for construction and implementation of the RA which identifies timing for initiation and completion of all critical path tasks. Respondents shall identify potential dates for completion of the project and major milestones.

C. Pre-final (90%) Design (RD-18) Under Original Order and Amended Order

Respondents shall submit the Pre-final (90%) Design (RD-18) when the design work is approximately 90 percent complete in accordance with the approved design management schedule. Respondents shall address all comments received from EPA on the Predesign and Intermediate (60%) Design review and all comments received from EPA on prior submittals and revisions to the Pre-final (90%) Design. Respondents shall clearly show any modification of the design on the design plans and specifications as a result of incorporation of the comments, and provide a response summary to the EPA comments and requested changes. Essentially, the Pre-final (90%) Design shall function as the draft version of the Final (100%) Design (RD-19). The following items shall be submitted as part of the Pre-final (90%) Design:

1. Status of Surveying, Easements and Other Data Acquisition Activities

An updated summary of survey data, easement information, utility requirements, acquisition access, and other data compiled during the RD investigative phase, that are necessary to implement the RA shall be included in the Pre-final (90%) Design.

2. Final Design Criteria Summary

An updated summary of the design criteria, based on the results of the RD investigative phase, shall be included in the Pre-final (90%) Design submittal. The Pre-final (90%) Design shall address Performance Standards and long-term monitoring requirements, in addition to the other parameters required under the Preliminary (30%) Design submittal.

3. Final Permitting Strategy

An updated permitting strategy, based on the results of the RD investigative activities and the pilot treatability/demonstration studies shall be included in the Pre-final (90%) Design submittal.

4. Complete Design Analyses

The selected design shall be presented, including the design calculations and an analysis supporting the design approach, in the Pre-final (90%) Design.

5. Complete Plans and Specifications

A complete set of construction drawings and specifications shall be submitted which describe the selected design. Drawings will be folded 8.5" x 11" size. Specifications shall be submitted in electronic form, and on recycled paper (50% post-consumer), printed double-sided.

6. Final Construction Schedule

Respondents shall submit a final construction schedule to EPA for approval.

D. Final (100%) Design (RD-19) Under Amended Order

After EPA review and comment on the Pre-final (90%) Design, Respondents shall submit the Final (100%) Design (RD-19). All Final (100%) Design documents shall be stamped and signed by Professional Engineers registered in the State of California for the appropriate discipline involved (e.g., Electrical Engineer for electrical designs, Mechanical Engineer for piping designs, etc.). The same items listed above under Pre-final (90%) Design, C, 1, 2, 3, 4, 5, and 6 shall be revised and submitted as part of the Final (100%) Design.

TASK 3 - RD INVESTIGATIVE ACTIVITIES AND OTHER RESPONSE ACTIONS

The RD investigative activities and other response actions under Task 3 shall be conducted to gather more data regarding the characteristics and extent of the subsurface gas, commence quarterly subsurface gas and groundwater monitoring, and to take any other necessary response actions needed to protect public health. The information gathered during this RD

phase shall provide additional data for completing revisions to the Pre-final (90%) Design (RD-18) to control the subsurface gases in areas outside of the reservoir area and any other necessary revisions needed to the size of the cap, the gas collection system, and other elements of the design.

See Attachment 3, Schedule and List of Deliverables, to the Amended Order for the dates that deliverables under Task 3 are due to EPA.

A. RD Investigative Activities Planning

Respondents shall complete the following deliverables in preparation for conducting the investigative field activities and other monitoring requirements:

1. Revised Quality Assurance Project Plan (QAPP) (RD-25)

Respondents shall revise the QAPP, submitted under the Original Order as RD-8, to incorporate the quality assurance requirements for the RD investigative work for subsurface gas, soils, and groundwater, and for any other actions described under the Amended Order and this Amended SOW. Respondents shall follow the guidelines provided under Task 2, A, 2, b, 2) of this Amended SOW, for preparing the Revised QAPP.

2. Revised Field Sampling and Analysis Plan (FSAP) (RD-26)

Respondents shall revise the FSAP, submitted under the Original Order as RD-6, to incorporate the sampling and analysis requirements for the RD investigative work for subsurface gas, soils, and groundwater, and needed for any other actions described under the Amended Order and this Amended SOW. Respondents shall follow the guidelines provided under Task 2, A, 2, b, 1), of this Amended SOW, for preparing the revised FSAP.

3. RD Investigative Activities Workplan (RD-27)

Respondents shall develop and implement a RD Investigative Activities Workplan (RD-27) for subsurface gas, soils, and groundwater, including, but not limited to the following components:

a. RD Investigative Activities

As described in Section III (Remedy Components) and in Section B, (Implementation of RD Investigative Activities) of Task 3 of this Amended SOW, the RD Investigative Activities Workplan (RD-27) shall include a comprehensive description and itemization of the additional data collection and evaluation activities to be performed and the plans and specifications to be prepared. A comprehensive design management schedule for completion of each major activity and submission of each deliverable also shall be included.

b. Treatability Study Work Plan (RD-9)

Respondents shall develop a Treatability Study Work Plan (RD-9) to investigate various technologies and alternatives, including soil vapor extraction (SVE) systems, for remediating the elevated soil gas levels in Areas 1/8 and in Area 7, and any other areas, if necessary. Respondents also shall evaluate other remediation alternatives (e.g., air injection, solidification with concrete, soils excavation) for mitigating or eliminating the subsurface gas. The Treatability Study Workplan shall be a component of the RD Investigative Studies Workplan (RD-27).

c. Waste Materials Disposal Plan

Respondents shall develop a Waste Materials Disposal Plan to evaluate alternatives for removing off-site or managing and disposing on-site the drums of waste materials left on the Site from prior investigative activities. The Plan shall include a discussion of field sampling procedures to be used for characterizing the waste materials, and a recommended alternative for the removal or disposal of these materials. The final alternatives analysis shall be included in the Final RD Investigative Summary Report (RD-31).

d. Site Security Plan

Respondents shall provide site security to limit and control Site access during the period of performance for the Amended Order and this Amended SOW. Site security procedures and measures shall be included in the RD Investigative Activities Workplan (RD-27).

4. Comprehensive Subsurface Gas Quarterly Monitoring Plan (RD-29)

Respondents shall prepare a Comprehensive Subsurface Gas Quarterly Monitoring Plan (RD-29) for EPA review and approval. Respondents shall implement the Plan within 30 days of EPA approval. The Plan shall identify all on-site and perimeter subsurface gas wells within a one mile radius of the Site and identify the specific wells to be included in a comprehensive subsurface gas monitoring network. If new wells need to be constructed, including a replacement well for the flooded gas well within the reservoir, the location and construction specifications for these wells shall be included in the Plan. Based on the results of the subsurface gas data, and if requested by EPA, the Plan shall be revised to include installation requirements for additional on-site, perimeter, or off-site subsurface gas monitoring wells. These additional wells shall be incorporated into the comprehensive subsurface gas well monitoring network. At the conclusion of the RA, it is anticipated that some or all of these subsurface gas wells will be used for compliance monitoring with the Performance Standards.

5. Comprehensive Groundwater Quarterly Monitoring Plan (RD-30)

Respondents shall prepare a Comprehensive Groundwater Quarterly Monitoring Plan (RD-29) for EPA review and approval. Respondents shall implement the Plan within 30 days of EPA approval. The Plan shall identify all existing on-site and off-site, upgradient and downgradient, groundwater monitoring wells within one mile of the Site. Of these identified wells, the Plan shall select specific wells and include the rationale for selecting these wells to be included in a comprehensive groundwater monitoring network. Justification shall be provided that the selected wells will adequately characterize the quality of the groundwater at the Site. If new wells need to be constructed, the location and construction specifications for these wells shall be included in the Plan. Based on the results of analyzing the groundwater monitoring data, and if requested by EPA, the Plan shall be revised to include installation requirements for additional on-site or off-site groundwater monitoring wells. These additional wells shall be incorporated into the comprehensive groundwater well monitoring network. At the conclusion of the RA, it is anticipated that some or all of these groundwater wells will be used for compliance monitoring with Performance Standards, if necessary.

6. Subsurface Gas Contingency Plan (RD-28)

Because of the existence of occupied businesses on the Site, develop and implement a Subsurface Gas Contingency Plan (RD-28) for methane and other volatile organic compounds for conducting indoor air monitoring of enclosed on-site structures, if determined necessary based on EPA's Interim Response Action Plan (See Attachment 2.A of this Amended SOW.) and the CIWMB's standards for methane. If requested by Respondents or at EPA's discretion, EPA may assume federal-lead for this task, or any portions thereof.

7. Technical Memoranda (RD-35)

Respondents shall develop and implement, after EPA approval, other Technical Memoranda (RD-35), related to RD activities or other response actions under the Amended Order or this Amended SOW, if requested by EPA.

B. Implementation of RD Investigative Activities

Respondents shall implement the following standards and commence the following planned investigative field activities and monitoring requirements, once EPA has approved the appropriate Plans:

1. Install Gas Vapor Wells

Install new perimeter monitoring wells and interior monitoring wells, in accordance with the RD Investigative Activities Workplan (RD-27) and the

Comprehensive Subsurface Gas Quarterly Monitoring Plan (RD-29), as requested by EPA.

2. Install Groundwater Monitoring Wells

Install new on-site or off-site groundwater monitoring wells, in accordance with the RD Investigative Activities Workplan (RD-27) and the Comprehensive Groundwater Quarterly Monitoring Plan (RD-30), as requested by EPA.

3 Commence Quarterly Subsurface Gas Monitoring

Commence a quarterly (or more frequent, if necessary) comprehensive monitoring program for subsurface gas, sampling the wells identified in the Comprehensive Subsurface Gas Quarterly Monitoring Plan (RD-29) and the RD Investigative Activities Workplan (RD-27), as requested by EPA. Add additional wells to the monitoring network, if requested by EPA.

4. Commence Quarterly Groundwater Monitoring

Commence quarterly (or more frequently, if necessary) comprehensive monitoring program for groundwater, sampling the wells identified in the Comprehensive Groundwater Quarterly Monitoring Plan (RD-30) and the RD Investigative Activities Workplan (RD-27), as requested by EPA. Add additional wells to the monitoring network, if requested by EPA.

5. Conduct Pilot Treatability/Demonstration Studies

Upon EPA approval of the Treatability Study Work Plan (RD-9), Respondents shall conduct the pilot treatability studies during the RD investigative phase. These studies shall include temporary pilot/demonstration studies on alternative technologies under consideration as potential remedies for the control or removal of subsurface soil gases. Sufficient studies need to be conducted to provide sufficient data to evaluate the feasibility of each of the technologies and to select the appropriate remedy in an amended ROD. As studies are completed, Respondents shall submit Technical Memoranda (RD-35) describing results, as needed.

6. Characterize Extent and Nature of Subsurface Gas

While the existing interior vapor wells and the new proposed perimeter and interior monitoring wells will provide additional data, these wells do not appear adequate to determine the sources or causes of the gas being generated at the site and to determine if there are potential off-site sources of gas. During this RD investigative phase, Respondents shall conduct the following investigative activities:

a. Gas and subsurface geological characterization analyses, including well pressure tests, soil moisture testing, and soil characterization, etc., to better understand the cause and sources of gases generated and migrating at the Site.

b. Evaluate the data collected to validate EPA "interim" standards for on-site buildings used during the RD investigative phase and for selecting final Performance Standards for the RA in an amended ROD.

c. Install additional on-site and off-site soil gas probes, including use of a mobile laboratory, if necessary, to provide sufficient data to support the basis for the design of the soil vapor extraction system(s) around the on-site buildings and the gas collection system in and around the reservoir area.

d. Collect sufficient data to determine the lateral extent of migrating gases, including the potential for off-site migration of subsurface gases, and the potential for migration of gases from off-site sources onto the Site.

7. Characterize Extent and Nature of Groundwater Contamination

Additional characterization studies and groundwater monitoring are needed to determine if the groundwater may be impacted by contaminated soils or subsurface soil gases at the Site. During this RD investigative phase, conduct the following investigative activities:

a. Surface areas within the reservoir where ponded rainwater has not drained from the Site have been observed. Leaching of this ponded rainwater through the soil cover of the reservoir may be the reason that the only vapor well within the reservoir is flooded and can no longer be sampled. Respondents shall collect liquid samples from this area to compare the characteristics of the liquid in the reservoir to the profile of other Site groundwater data.

b. Respondents shall collect sufficient data to determine the lateral extent of any contaminated groundwater, including the potential for off-site migration of any contaminants.

8. Implement the State's Standard for Methane and Conduct More Frequent Subsurface Gas Monitoring or Indoor Air Monitoring, If Needed

Respondents shall implement the California Integrated Waste Management Board's (CIWMB's) standard for methane in and around on-site buildings during this RD investigative phase. If the State's standards are exceeded, Respondents shall conduct the necessary actions as required by the Subsurface Gas Contingency Plan (RD-28). If requested by Respondents or at

EPA's discretion, EPA may assume federal-lead in coordination with State and local agencies for this task, or any portion thereof.

9. Implement "Interim" Risk-Based Action Levels for Vinyl Chloride and Benzene and Conduct More Frequent Subsurface Gas Monitoring or Indoor Air Monitoring, if Needed

Respondents shall implement EPA's "Interim Response Action Plan for WDI Superfund Site", dated March 20, 1997, for vinyl chloride and benzene in and around on-site buildings during this RD investigative phase. (See Attachment 2.A to this Amended SOW.) If EPA's interim action levels are exceeded, Respondents shall conduct the necessary activities, including engineering remedies, as required in the Subsurface Gas Contingency Plan (RD-28). If requested by Respondents or at EPA's discretion, EPA may assume federal-lead for this task, or any portion thereof.

10. Implement Engineering Remedies

Respondents shall develop and implement, if necessary, during the RD investigative phase, remedial engineering alternatives (e.g., additional gas extraction wells, increased extraction rates, sealing foundation cracks, floor or ceiling vents, window fans) to address potential exposure of on-site workers to volatile organics which pose a risk. Respondents shall include in the Subsurface Gas Contingency Plan (RD-28) the criteria for implementing these engineering remedies. If requested by Respondents or at EPA's discretion, EPA may assume federal-lead for this task, or any portions thereof.

C. Close-Out of RD Investigative Activities Phase and Completion of RD

1. Final RD Investigative Summary Report/Alternatives Analyses (RD-31)

Respondents shall prepare a Final RD Investigative Summary Report/ Alternatives Analyses for subsurface gas and soils, which includes the following components:

a. Compilation and evaluation of the data collected during the RD investigative phase and, if possible from later quarterly monitoring, and comparisons of this new data to the data collected during earlier investigative phases in 1989 and 1995.

b. Recommendations of various design changes or alternatives to the Pre-final 90% Design (RD-18), based on the evaluation of the new and existing data from 1989 and 1995.

c. Completion of an analysis of various alternatives considered for proposed RD changes, including, but not limited to, alternatives for disposal of drummed soils and liquid waste materials left on-site from

prior investigations, alternatives for active gas collection systems for the reservoir area, alternatives for soil vapor extraction (SVE) systems or other technologies for controlling gases in areas outside the reservoir near on-site buildings, alternatives (including excavation) for reducing or eliminating high levels of methane or other volatile organic compounds detected in other areas of the Site outside the reservoir. The alternatives analysis shall address the nine criteria set forth in 40 C.F.R. Section 300.430(e)(9), and such other criteria as EPA may identify.

2. Final Groundwater Investigative Summary Report/Feasibility Study (RD-32)

Respondents shall prepare a Final Investigative Summary Report/Feasibility Study for groundwater, which includes the following components:

a. Compilation and evaluation of the data collected during the RD investigative phase and from later quarterly monitoring, and comparisons of this new data to the data collected during earlier investigative phases in 1989, 1992, and 1995.

b. Recommendations on what type of action, including long-term groundwater monitoring, should be taken on groundwater.

c. If able to gather sufficient data prior to the completion of the RD, recommendations on various design changes or alternatives to the Pre-final (90%) Design or the Final (100%) Design, based on the evaluation of new data, as compared to data collected in 1989, 1992, and 1995.

d. Completion of a feasibility study of various alternatives considered for a new Record of Decision (ROD) for groundwater or an amendment or "Explanation of Significant Difference" to the existing ROD for subsurface gas and soils, including, but not limited to, the feasibility of a "no action" groundwater ROD, except for continued groundwater monitoring.

3. Revised Pre-final (90%) Design (RD-18)

Respondents shall complete a revised Pre-final (90%) Design, which considers the findings of the RD investigative work described in the Final Investigative Summary Report/Alternatives Analysis for Subsurface Gas and Soils (RD-31). .

4. Final (100%) Design (RD-19)

Respondents shall complete the Final (100%) Design within 20 days of EPA approval of the Pre-final (90%) Design.

5. Engineering Certification of Completion of All Work (RD-34)

Respondents shall provide this certification from a licensed engineer within 30 days of the completion of all work conducted under this Amended Order and this Amended SOW.

D. Continuing Activities

1. Subsurface Gas Monitoring

Respondents shall continue subsurface gas monitoring, as required under the EPA approved Comprehensive Subsurface Gas Quarterly Monitoring Plan (RD-29).

2. Groundwater Monitoring

Respondents shall continue groundwater monitoring, as required under the EPA approved Comprehensive Groundwater Quarterly Monitoring Plan (RD-30).

3. Pilot Treatability/Demonstration Studies

Respondents shall continue pilot treatability/demonstration studies, as required under the EPA approved Treatability Study Workplan (RD-9).

REFERENCES

The following list, although not comprehensive, comprises many of the regulations and guidance documents that apply to the RD process. Respondents shall review these documents and use the information provided therein in performing the RD and preparing all deliverables under this Amended SOW. EPA may provide additional references to the Respondents during the course of the Work under the Amended Order and this Amended SOW.

1. "A Compendium of Superfund Field Operations Methods," Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, EPA/540/P-87/001a, August 1987, OSWER Directive No. 9355.0-14.

2. "American National Standards Practices for Respiratory Protection," American National Standards Institute Z88.2-1980, March 11, 1981.

3. "CERCLA Compliance with Other Laws Manual," Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, August 1988 (Draft), OSWER Directive No. 9234.1-01 and -02.

4. "EPA NEIC Policies and Procedures Manual," EPA-330/9-78-001-R, May 1978, revised August 1991.

5. "EPA Requirements for Quality Assurance Project Plans for Environmental Data Operations, EPA QA/R-5, Draft Interim Final," U.S. EPA, Quality Assurance Management Staff, August 1994.

6. "Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, Interim Final," U.S. EPA, Office of Emergency and Remedial Response, October 1988, OSWER Directive No. 9355.3-01.

7. "Guidance for Data Quality Assessment, Practical Methods for Data Analysis, EPA QA/G-9, QA 96 Version," EPA/600/R-96/084, July 1996.

8. "Guidance for Planning for Data Collection in Support of Environmental Decision Making Using the Data Quality Objectives Process," EPA QA/G-4, Quality Assurance Management Staff, Interim Final, October 6, 1993

9. "Guidance for the Data Quality Objectives Process, EPA QA/G-4, Final," EPA. Quality Assurance Management Staff, September 1994.

10. "Guidelines and Specifications for Preparing Quality Assurance Program Plans," U.S. EPA, Office of Research and Development, Cincinnati, OH, QAMS-004/80, 1983.

11. "Health and Safety Requirements of Employees Employed in Field Activities," U.S. EPA, Office of Emergency and Remedial Response, July 12, 1981, EPA Order No. 1440.2.

12. "Interim Final Guidance on Oversight of Remedial Designs and Remedial Actions Performed by Potentially Responsible Parties," U.S. EPA, Office of Emergency and Remedial Response, February 14, 1990, OSWER Directive No. 9355.5-01.

13. "Interim Guidance on Compliance with Applicable or Relevant and Appropriate Requirements," U.S. EPA, Office of Emergency and Remedial Response, July 9, 1987, OSWER Directive No. 9234.0-05.

14. "Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans," U.S. EPA, Office of Emergency and Remedial Response, QAMS-005/80, December 1980.

15. "National Oil and Hazardous Substances Pollution Contingency Plan, Final Rule", Federal Register 40 CFR Part 300, March 8, 1990.

16. "NIOSH Manual of Analytical Methods," 2d edition. Volumes I - VII, or the 3rd edition, Volumes I and II, National Institute of Occupational Safety and Health.

17. "Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities," National Institute of Occupational Safety and Health/Occupational Health and Safety Administration/United States Coast Guard/Environmental Protection Agency, October 1985.

18. "Preparation of a US EPA Region 9 Field Sampling Plan for Private and State Lead Superfund Projects", Document Control No. 9QA-06-93, August 1993, Quality Assurance Management Section, U.S. EPA Region 9

19. "Quality Assurance and Quality Control for Waste Containment Facilities", EPA 600/R-93/182, September 1993

20. "Quality in the Constructed Project: A Guideline for Owners, Designers, and Constructors, Volume 1, Preliminary Edition for Trial Use and Comment," American Society of Civil Engineers, May 1988.

21. "Standards for General Industry," 29 CFR Part 1910, Occupational Health and Safety Administration.

22. "Standards for the Construction Industry," 29 CFR 1926, Occupational Health and Safety Administration.

23. "Standard Operating Safety Guides," U.S. EPA, Office of Emergency and Remedial Response, November 1984.

24. "Superfund Remedial Design and Remedial Action Guidance," U.S. EPA, Office of Emergency and Remedial Response, June 1986, OSWER Directive No. 9355.O-4A.

25. "TLVs - Threshold Limit Values and Biological Exposure Indices for 1987 - 88," American Conference of Governmental Industrial Hygienists.

26. "Users Guide to the EPA Contract Laboratory Program," U.S. EPA, Sample Management Office, August 1982.

27. "US EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review," U.S. EPA, Office of Solid Waste and Emergency Response, Publication 9240.1-05--01, EPA-540/R-94-013, February 1994.

28. "US EPA Contract Laboratory Program National Functional Guidelines for Organic Data Review," U.S. EPA, Office of Solid Waste and Emergency Response, Publication 9240.1-05, EPA-540/R-94-012, February 1994.

29. "US EPA Contract Laboratory Program Statement of Work for Inorganics Analysis," U.S. EPA, Office of Emergency and Remedial Response, July 1988.

30. "US EPA Contract Laboratory Program Statement of Work for Organics Analysis," U.S. EPA, Office of Emergency and Remedial Response, February 1988.

31. "US EPA Region 9 Guidance for Preparing Quality Assurance Project Plans for Superfund Remedial Projects", Document Control No. 9QA-03-89, Quality Assurance Management Section, Environmental Services Branch, US EPA Region 9, September 1989

ATTACHMENT 2.A.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

Memorandum:

Date: March 20, 1997

Subject: Interim Response Action Plan for WDI Superfund site

From: **Stanford J. Smucker, Ph.D.**
Regional Toxicologist (SFD-8-B)

To: **Andria Benner**
Remedial Project Manager (H-7-2)

Per your request, I have prepared a response action plan (RAP) for Waste Disposal Inc.(WDI) Superfund site to identify interim trigger levels for benzene and vinyl chloride in on-site vapor wells and to streamline associated response actions based on concerns for potential health impacts during the interim period while evaluation and monitoring are being conducted at WDI. Because this RAP was based on characteristics unique to this Superfund site, the trigger levels contained in this memorandum should not be applied to other sites without adjusting for corresponding specific characteristics of those sites.

This memorandum focuses exclusively on potential exposures that may occur as the result of infiltration of subsurface gases into buildings located on-site. Since there are no residences located on-site, the trigger levels and response actions are based on worker exposures only.

In addition, action levels were not developed for other volatile organic compounds (VOCs) present in subsurface gases at WDI site. However, action levels may be developed for other VOCs as needed.

Interim Response Action Plan Monitoring Program

EPA and WDI Group (WDIG), the potentially responsible parties, are working toward an agreed upon Comprehensive Subsurface Gas Monitoring Program that will be conducted under a pending Amended Unilateral Administrative Order (UAO). In addition, EPA will be conducting a separate indoor air monitoring program for on-site buildings to ensure on-site workers are not exposed to VOCs associated with subsurface gases. These activities will be conducted in accordance with the pending Amended UAO and any other EPA-approved plans.

Trigger Concentration Levels for Benzene and Vinyl Chloride

There is extensive documentation evaluating the potential health effects associated with exposures to benzene and vinyl chloride. The "Toxicological Profiles for Benzene and Vinyl Chloride"developed by ATSDR (ATSDR 1996a, b) is currently being updated and provides a peer reviewed summary of current status of health effects information for vinyl chloride and benzene. These documents, in addition to EPA toxicity databases (IRIS 1997, HEAST 1995, and NCEA 1997), and EPA Region 9 supplemental guidance, "Preliminary Remediation Goals" (Smucker 1996) and "Indoor Air Exposures at a Superfund Site" (Hiatt et al. 1993) have been used as the basis for the development of the RAP trigger levels.

As is the case with exposure to any compound, the potential impacts of risks associated with an exposure must consider, in addition to the chemical's toxicity, the duration, frequency, and route of exposure relevant to the contact, as well as the amount of chemical contacted. The other key parameter is identification of populations likely to be exposed in the scenario being evaluated and their relative sensitivities.

Exposure Assumptions. For the purpose of developing this RAP, the following exposure scenario assumptions have been made:

- The population being evaluated is workers who occupy buildings on-site.
- Inhalation is the route of exposure being evaluated.
- Workers in offices built on slab-on grade foundations could be exposed to 1% of the level of vinyl chloride / benzene vapors found in adjacent vapor wells (see basis of 1/100 attenuation factor below).
- The duration of exposure is assumed to be 25 years for chronic health concerns; and a period of days, weeks, or months for acute or subchronic health effects.
- National exposure factor defaults for highly exposed workers (e.g. indoor respiration rate of 15 cubic meters per day, exposure frequency of 250 days per year, and average body weight of 70 kg) are appropriate for office workers at WDI.

Toxicity Information. For the purposes of this RAP the following toxicity information was compiled or derived:

- Cancer slope factor (CSF) for inhalation of benzene (2.9×10^{-2} kg-day/mg) was obtained from IRIS (1997) and the CSF for inhalation of vinyl chloride (3×10^{-1} kg-day/mg) from HEAST (1995).
- Short-term toxicity value for vinyl chloride (50 ppb in indoor air) is based on

reproductive toxicity from Hiatt et al (1993), adjusted upward to account for intermittent exposure (15/20 cubic meters breathed per day and 5/7 days per week).

- Short-term toxicity value for benzene (100 ppb in indoor air) is based on hematological toxicity from ATSDR (ATSDR 1996a), adjusted upward to account for intermittent exposure (15/20 cubic meters breathed per day and 5/7 days per week).

Calculations. Trigger level calculations are based on equations that are similar to the air equations presented in EPA Region 9's Preliminary Remediation Goals (PRGs), using various risk levels and occupational exposure assumptions as inputs into the equation.

The general procedure for calculating risk-based concentrations for vapor wells is a three-step approach. First step is to estimate risk-based concentrations of contaminants in indoor air applying "PRG-like" equations. Second step is to convert from units of micrograms per cubic meter to parts per billion by volume (ppb). The third step is to apply an attenuation factor to account for expected differences in gas concentrations in subsurface vapor wells as compared with gas concentrations in buildings constructed with slab-on grade foundations.

Attenuation Factor. In an effort to evaluate the potential impact of subsurface landfill gas on indoor air quality of office buildings located on-site, an attenuation factor that relates soil gas concentration to an indoor air concentration was applied to provide a conservative "back-of-the-envelope" screening-level estimation of air concentrations in buildings. Based on modeling performed in the baseline risk assessment for WDI (EPA 1989a), an attenuation factor of 0.01 (or 1%) was assumed.

EPA expects that the chosen attenuation factor is protective of workers on-site. As a reality check, this value was also compared against literature values. Little et al. (1992) suggest a range of attenuation factors (0.4 to 0.0004) that could be used for a building at 100 meter distance from a landfill source. As is apparent from this survey, the value assumed for purposes of deriving an interim action level for WDI falls on the conservative end of this range.

Uncertainties. There are numerous uncertainties associated with the interim trigger levels for vinyl chloride and benzene. Sources of uncertainty include assumptions regarding the exposure scenarios, the attenuation factors, and toxicity values that were used.

Human behavior patterns can strongly affect exposure results. Standard exposure defaults for a reasonable maximum exposure were obtained from EPA's OSWER Directive 9285.6-03 (EPA 1991) due to a lack of site-specific information. As noted in this Directive, "the exposure factors presented in this document are generally considered most appropriate and should be used in baseline risk assessments unless alternate or site-specific values can be clearly justified by supporting data."

Another source of uncertainty is the attenuation factor that was used. It is acknowledged that

attenuation factors provide only a crude estimate of potential indoor air quality. Such variables as distance, soil type, meteorologic conditions, building and source characteristics can strongly affect the extent to which subsurface vapors may infiltrate into buildings. Because of these attendant uncertainties, EPA chose an attenuation factor that will likely overestimate potential indoor air concentrations to provide a level of protectiveness that is consistent with "Risk Assessment Guidance for Superfund" (EPA 1989b).

Additional uncertainties involve potency calculations, the main uncertainties (e.g. extrapolation from high dose animal studies to low dose human exposures, individual sensitivity to chemicals etc.) are well known and will not be discussed here. It is noteworthy that the carcinogenicity of benzene and vinyl chloride are on more solid ground than some of the other VOCs detected in vapor wells on-site. A causal association between benzene / vinyl chloride exposure and carcinogenicity has been established based on overwhelming human epidemiological evidence and supporting animal studies.

Description of Actions

Tables 1 and 2 present the action levels and corresponding actions. In order to avoid actions based on an anomalous data point, a verification sample will be taken within two weeks following any detected concentration in vapor wells above 250 ppb vinyl chloride and/or 2000 ppb benzene. If the vapor well level concentrations exceed 5,000 ppb vinyl chloride and/or 10,000 ppb benzene, confirmatory samples will be collected within a week.

Table 1. Interim risk-based trigger levels for vinyl chloride assuming occupational exposures.[1]

Measured Soil Gas Level (ppb)	Estimated Indoor Air Level (ppb)	Recommended Response Action	Response Comment
<25	<0.25	**No action.** Continue monitoring on a quarterly basis until EPA agrees that characterization is sufficient.	**Negligible Risk.**
25 - 250	0.25 - 2.5	**No immediate action.** Continue monitoring on a quarterly basis. Indoor air sampling may be undertaken at RPM's discretion.[2]	**Low Increased Risk.** Potential lifetime excess cancer risks arising from a 25-year exposure for adults are $\leq 1 \times 10^{-5}$ to 1×10^{-4}, which are at the upper end of the Superfund target risk range.
250 - 5000	2.5 - 50	**Interim action.** Confirm results within two weeks. Resample well for two successive monthly monitoring periods. Indoor air sampling strongly recommended if results are confirmed.[2]	**Moderate Increased Risk.** Potential lifetime excess cancer risks arising from a 25-year exposure for adults are $\leq 1 \times 10^{-4}$ to 2×10^{-3}.
>5000	>50	**Immediate interim action.** Verify results within one week. Perform indoor air sampling within one month of confirmatory sampling.[2]	**High Increased Risk.** Concentrations exceed short-term toxicity values. Potential risk of reproductive toxicity in males exposed subchronically.

Footnotes:

[1]These values are to be applied for on-site workers. A separate set of values will need to be developed for off-site residences.

[2]It is understood that concentrations at these levels would trigger additional engineering remedies (e.g. added extraction wells, expanded SVE system, expanded bio-venting) to reduce these levels.

Table 2. Interim risk-based trigger levels for benzene assuming occupational exposures.[1]

Measured Soil Gas Level (ppb)	Estimated Indoor Air Level (ppb)	Recommended Response Action	Response Comment
<200	<2	**No action.** Continue monitoring on a quarterly basis until EPA agrees that characterization is sufficient.	**Negligible Risk.**
200 - 2000	2 - 20	**No immediate action.** Continue monitoring on a quarterly basis. Indoor air sampling may be undertaken at RPM's discretion.[2]	**Low Increased Risk.** Potential lifetime excess cancer risks arising from a 25-year exposure for adults are $\leq 1 \times 10^{-5}$ to 1×10^{-4}, which are at the upper end of the Superfund target risk range.
2000 - 10,000	20 - 100	**Interim action.** Confirm results within two weeks. Resample well for two successive monthly monitoring periods. Indoor air sampling strongly recommended if results are confirmed.[2]	**Moderate Increased Risk.** Potential lifetime excess cancer risks arising from a 25-year exposure for adults exceed Superfund target risk range.
>10,000	>100	**Immediate interim action.** Verify results within one week. Perform indoor air sampling within one month of confirmatory sampling.[2]	**High Increased Risk.** Concentrations exceed short-term toxicity value. Potential risk of hematological toxicity in workers exposed sub-chronically.

Footnotes:

[1]These values are to be applied for on-site workers. A separate set of values will need to be developed for off-site residences.

[2]It is understood that concentrations at these levels would trigger additional engineering remedies (e.g. added extraction wells, expanded SVE system, expanded bio-venting) to reduce these levels.

REFERENCES

ATSDR, 1996a. "Draft Update Toxicological Profile for Benzene", Agency for Toxic Substances and Disease Registry, U.S. Public Health Service. February 1996.

ATSDR, 1996b. "Draft Update Toxicological Profile for Vinyl Chloride", Agency for Toxic Substances and Disease Registry, U.S. Public Health Service. February 1996.

EPA, 1989a. "Final Endangerment Assessment, Waste Disposal Inc. Sante Fe Springs, California", Prepared for U.S. Environmental Protection Agency by EBASCO Services, Inc. November 1989.

EPA, 1989b. "Risk Assessment Guidance for Superfund: Volume 1 - Human Health" (RAGS), U.S. Environmental Protection Agency, Washington D.C. EPA 540-1-89-002.

EPA, 1991. "Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual Supplemental Guidance - Standard Default Exposure Factors, Interim Final", U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response (OSWER Directive 9285.6-03). March 1991.

EPA, 1995. "Health Effects Assessment Summary Tables" (HEAST), U.S. Environmental Protection Agency, Washington D.C. EPA 540-R-94-114.

EPA, 1997a. "Integrated Risk Information System" (IRIS), U.S. Environmental Protection Agency, Washington D.C.

EPA, 1997b. "Risk Assessment Issue Paper for: Derivation of a Provisional Subchronic RfC for Benzene (CASRN 71-43-2)", National Center for Environmental Assessment, U.S. Environmental Protection Agency, Cincinnati, Ohio.

Hiatt G.F.S. et. al, 1993. "Children as a Sensitive Subpopulation: Vinyl Chloride Action Levels - Indoor Air Exposures at a Superfund Site", abstract presented at the International Conference on Health Effects of Hazardous Waste, May 1993.

Little J.C. et. al, 1992. "Transport of Subsurface Contaminants into Buildings - an Exposure Pathway for Volatile Organics", Environmental Science Technology. 26(11):2058-2066.

Smucker S.J., 1996. "EPA Region 9 Preliminary Remediation Goals (PRGs)", U.S. Environmental Protection Agency Region 9, San Francisco, California. August 1996.

ATTACHMENT 3

SCHEDULE AND LIST OF DELIVERABLES

(For Amended Administrative Order for Remedial Design and Other Response Actions for the Waste Disposal, Inc. Superfund Site)

The following is a list of deliverables and dates due to EPA, in accordance with the Original Order and this Amended Order. This list is not complete, and additional documents may be required based on field activities at the Site. EPA may extend the due date for a given document without further amendments.

Original Order was signed on August 18, 1994; the Effective Date of Original Order was August 30, 1994.

Amended Order was signed March 31, 1997; the Effective Date of Amended Order is April 14, 1997.

Number	Deliverable	Date Due	Date/Compliance Document
RD-1	Notice of Intent to Comply with Original Order	5 days after effective date of Original Order	9/26/94 ltr. from Anne-Marie Torrez, Chevron, to Rusty Harris-Bishop, EPA, confirmed intent to comply.
RD-2	Selection of Design Contractor	15 days after effective date of Original Order	9/9/94 EPA ltr, from R. Harris- Bishop, to Stephen Mason, Hanna & Morton, granted extension until 9/20/94; 9/20/94 ltr. from S. Mason, Hanna & Morton, to R. Harris-Bishop, EPA, selects Environmental Solutions, Inc.; R. Harris-Bishop, EPA, approved selected design contractor in ltr., dated 9/27/94, to S. Mason, Hanna & Morton.

Number	Deliverable	Date Due	Date/Compliance Document
RD-3	Qualifications of Selected Design Contractor	15 days after effective date of Original Order	9/22/94 ltr. from S. Mason, Hanna & Morton, to R. Harris-Bishop, EPA. R. Harris-Bishop, EPA, approved qualifications in ltr., dated 9/27/94, to S. Mason.
RD-4	PRP Project Coordinator	15 days after effective date of Original Order	9/22/94 ltr. from Stephen Mason, Hanna & Morton, to R. Harris-Bishop designated PRP Project Coordinator; R. Harris-Bishop, EPA, approved designation in ltr., dated 9/27/94, to S. Mason, Hanna & Morton.
RD-5	Remedial Design Work Plan	30 days after EPA approval of Design Contractor under Original Order	Draft Workplan, dated 10/1/94, prepared by Environmental Solutions, Inc. (ESI), transmitted by Ian Webster, Unocal to R. Harris-Bishop, EPA on 10/27/94. R. Harris-Bishop, EPA, sent approval ltr. with contingencies on 1/17/95 to I. Webster, WDIG. Revised RD Workplan, dated March 1995, transmitted to EPA on 3/30/95. Final approval ltr. from R. Harris-Bishop, EPA to I. Webster, WDIG, dated 4/12/95. RD Workplan enforceable as of 4/12/95.

Number	Deliverable	Date Due	Date/Compliance Document
RD-6	Sampling and Analysis Plan (SAP)	30 days after EPA approval of Design Contractor (See RD-26)	Draft SAP, dated Nov 1994, prepared by ESI, as appendix to RD Workplan, transmitted on 11/28/94 to R. Harris-Bishop, EPA, by I. Webster, WDIG. R. Harris-Bishop, EPA, approval ltr. with contingencies sent to I. Webster, WDIG, on 1/17/95. Based on EPA's 1/17/95 and 3/15/95 comments, Final SAP, prepared by ESI as appendix to RD Workplan dated March 1995, transmitted to R. Harris-Bishop, EPA, from I. Webster, WDIG, on 3/30/95.
RD-7	Community Contingency Plan	30 days after EPA approval of Design Contractor under Original Order (See RD-11)	March 1995 Health & Safety Plan, prepared by ESI, refers to a Community Contingency Plan (CCP), to be "completed at a later date" as Attachment A; however, no CCP was located in EPA files. CCP shall be submitted as Attachment A as part of a revised Health and Safety Plan (RD-11) under Amended Order. If requested by Respondents, EPA may, at its discretion, assume federal-lead for this task, or portions thereof.

Number	Deliverable	Date Due	Date/Compliance Document
RD-8	Quality Assurance Project Plan (QAPP)	30 days after EPA approval of Design Contractor under Original Order (See RD-25)	Draft QAPP, dated Nov 1994, prepared by ESI, as appendix to RD Workplan, transmitted on 11/28/94 to R. Harris-Bishop, EPA, by I. Webster, WDIG. R. Harris-Bishop, EPA, approval ltr. with contingencies sent to I. Webster, WDIG, on 1/17/95. Based on EPA's 1/17/95 and 3/15/95 comments, Final QAPP, prepared by ESI as appendix to RD Workplan dated March 1995, transmitted to R. Harris-Bishop, EPA, from I. Webster, WDIG, on 3/30/95. Submittal of Construction QAPP deferred until conclusion of RD, per Table 1.1 of RD Workplan, dated March 1995. Revised QAPP (RD-25) due 30 days after effective date of Amended Order.
RD-9	Treatability Study Work Plan	30 days after EPA approval of Design Contractor under Original Order (See RD-27)	EPA ltr., dated 9/27/94, from R. Harris - Bishop to Stephen Mason, Hanna and Morton, rescinded requirement for RD-9 due to change in proposed SITE project, but reserved EPA's right to reinstate the requirement. EPA has reinstated a Treatability Study Workplan, as a component of RD-27 under this Amended Order.

Number	Deliverable	Date Due	Date/Compliance Document
RD-10	Data Acquisition and Management Plan (DAMP)	45 days after effective date of Amended Order	Document not required, per EPA ltr., dated 12/28/94, from R. Harris-Bishop, EPA, to I. Webster, WDIG. Because of data collection planned under Amended Order, RD-10 is reinstated.
RD-11	Site Health and Safety Plan	30 days after EPA approval of Design Contractor under Original Order; Revised Plan due 40 days after effective date of Amended Order	11/28/94; Draft Plan, dated Nov 1994, prepared by Environmental Solutions, Inc.(ESI), as appendix to RD Workplan, transmitted to R. Harris-Bishop, EPA, to I. Webster, WDIG; Final Plan resubmitted to EPA on 3/30/95, as appendix to RD Workplan, March 1995. CCP (RD-7) and Material Safety Data Sheets, not submitted with Health & Safety Plan. While EPA approval is not required, Health & Safety Plan must be a complete document.
RD 12-15	Not Used; Held in Reserve		

Number	Deliverable	Date Due	Date/Compliance Document
RD-16	Preliminary (30%) Design	Based on approved RD Work Plan schedule under Original Order	Preliminary (30%) Design and Intermediate (60%) Design combined in one report, dated October 1995, prepared by ESI, transmitted to R. Harris-Bishop, EPA, by I. Webster, WDIG, on 10/16/95. EPA submitted comments on 30%/60% Design Report on 12/18/95. WDIG submitted a response summary 1/31/96; EPA resubmitted comments on 2/22/96; WDIG submitted a response summary on 3/1/96; EPA submitted final comments, including concerns re: gas data gaps, and approved 30%/60% on 3/13/96. Revised 30%/60% Design submitted to R. Harris-Bishop, EPA, from I. Webster, WDIG, on 6/4/96.
RD-17	Intermediate (60%) Design	Based on approved RD Workplan schedule under Original Order	See RD-16 above.

Number	Deliverable	Date Due	Date/Compliance Document
RD-18	Pre-final (90%) Design	Based on approved RD Work Plan schedule under Original Order; 30 days after EPA approval of Final RD Investigative Summary Report (RD-31) under Amended Order	90% Design Report, dated April 1996, prepared by ESI, transmitted by I. Webster, WDIG, to R. Harris-Bishop, EPA, on 4/13/96. A. Benner, EPA, sent comments on 90% Design to I. Webster, WDIG, on 11/1/96. WDIG submitted a response summary on 1/20/97. EPA's comments pending. Additionally, A. Benner, EPA, sent a ltr., dated 10/31/96, to I. Webster, WDIG, requesting submittal of RD investigative workplans for subsurface gas and groundwater. I. Webster, WDIG, transmitted TM #4 (Soil Gas Design and Monitoring) and TM #5 (Groundwater Sampling) to A. Benner on 12/17/96. A. Benner, EPA, transmitted comments on TM#4 to I. Webster, WDIG, on 2/18/97. WDIG's summary ltr. of revisions planned for TM#4 due 4/14/97 to EPA. Changes will be incorporated by WDIG into RD Investigative Activities Workplan (RD-27) due 30 days after effective date of Order.

Number	Deliverable	Date Due	Date/Compliance Document
RD-19	Final (100%) Design	Within 20 days of EPA comments on revised Pre-final (90%) Design under Amended Order.	
RD-20	Site Access Agreements	60 days after effective date of Original Order; 20 days prior to initiating RD field activity under Amended Order	3/1/95, Site Access Indemnification Agreement (SAIA) submitted by John Van Vlear, Brown, Pistone, Hurlly, Van Vlear & Seltzer, to I. Webster, WDIG. 3/19/97, two SAIAs (Gale Searing, dated 2/6/95; Gene Welter, dated 2/9/96) submitted by I. Webster, WDIG, to A. Benner, EPA.
RD-21	Records Preservation Notice for Original Order	45 days after effective date of Original Order (See RD-35)	10/14/95, Records Preservation Notices submitted to R. Harris-Bishop, EPA, by the WDIG (D. McCarrel, Texaco; M. Skinner, Mobil; J. Stillmun, FMC Corp., J.P. Dukes, Santa Fe Energy Resources; J. Wolff, Chevron; S. Mason, Hanna and Morton, for Dia-Log Co.; A.Garvin, Brobeck Phleger & Harrison, for Dresser Industries, Inc.). 3/19/97, Records Preservation Notice submitted by Unocal (I. Webster).

Number	Deliverable	Date Due	Date/Compliance Document
RD-22	Financial Assurance for Original Order and Amended Order	30 days after approval of RD Work Plan under Original Order	3/19/97, Financial Assurance documentation (Chevron, Texaco, Unocal) submitted to A. Benner, EPA, from I. Webster, WDIG. This documentation also suffices for the Amended Order.
RD-23	Design Contractor Insurance or Indemnification for Original Order and Amended Order	7 days prior to initiation of field activities under Original Order	3/19/97, Design Contractor Insurance and Indemnification (extracted pages from WDIG contract with Environmental Solutions, Inc., dated 7/19/95) submitted to A. Benner, EPA, from I. Webster, WDIG.
RD-24	Notice of Intent to Comply with Amended Order	30 days after signing of Amended Order	
RD-25	Revised Quality Assurance Project Plan (QAPP)	20 days from receipt of EPA comments on draft	See RD-8 under Original Order
RD-26	Revised Field Sampling and Analysis Plan (FSAP)	20 days from receipt of EPA comments on draft	See RD-6 under Original Order

Number	Deliverable	Date Due	Date/Compliance Document
RD-27	RD Investigative Activities Workplan (Subsurface Gas, Soils & Groundwater)	30 days from signing date of Amended Order of Amended Order	10/31/96 EPA ltr., from A. Benner to I. Webster, WDIG, requested submittal of RD investigative workplans for subsurface gas and groundwater. 12/17/96, WDIG transmitted Technical Memorandum (TM) #4 (Soil Gas Design and Monitoring) and TM #5 (Groundwater Sampling) to EPA. 2/18/97, EPA sent comments on TM #4 to WDIG. 3/13/96 EPA ltr. requests that WDIG submit a summary ltr. of revisions for TM #4 by 4/14/97. 3/18/97 EPA ltr. confirms that RD Investigative Activities Workplan will incorporate revisions to TM#4. Treatability Study Workplan to be incorporated into RD Investigative Activities Workplan.
RD-28	Subsurface Gas Contingency Plan	75 days after effective date of Amended Order	If requested by Respondents or at EPA's discretion, EPA may assume federal-lead for this task, or any portions thereof.
RD-29	Comprehensive Subsurface Gas Quarterly Monitoring Plan	45 days after effective date of Amended Order	

Number	Deliverable	Date Due	Date/Compliance Document
RD-30	Comprehensive Groundwater Quarterly Monitoring Plan	60 days after effective date of Amended Order	
RD-31	Final RD Investigative Summary Report/Alternatives Analyses for Subsurface Gas and Soils	30 days after completion of tasks included in RD Investigative Activities Workplan	
RD-32	Final Groundwater Investigative Summary Report/Feasibility Study for Groundwater	30 days after request by EPA Project Mgr. under Amended Order	
RD-33	Records Preservation Notice for Amended Order	45 days after effective date of Amended Order	
RD-34	Engineering Certification of Completion of All Work Under the Amended Order	30 days after completion of all RD work under Amended Order	
RD-35	Additional Technical Memoranda, If Necessary	30 days after request by EPA Project Mgr. under Amended Order	